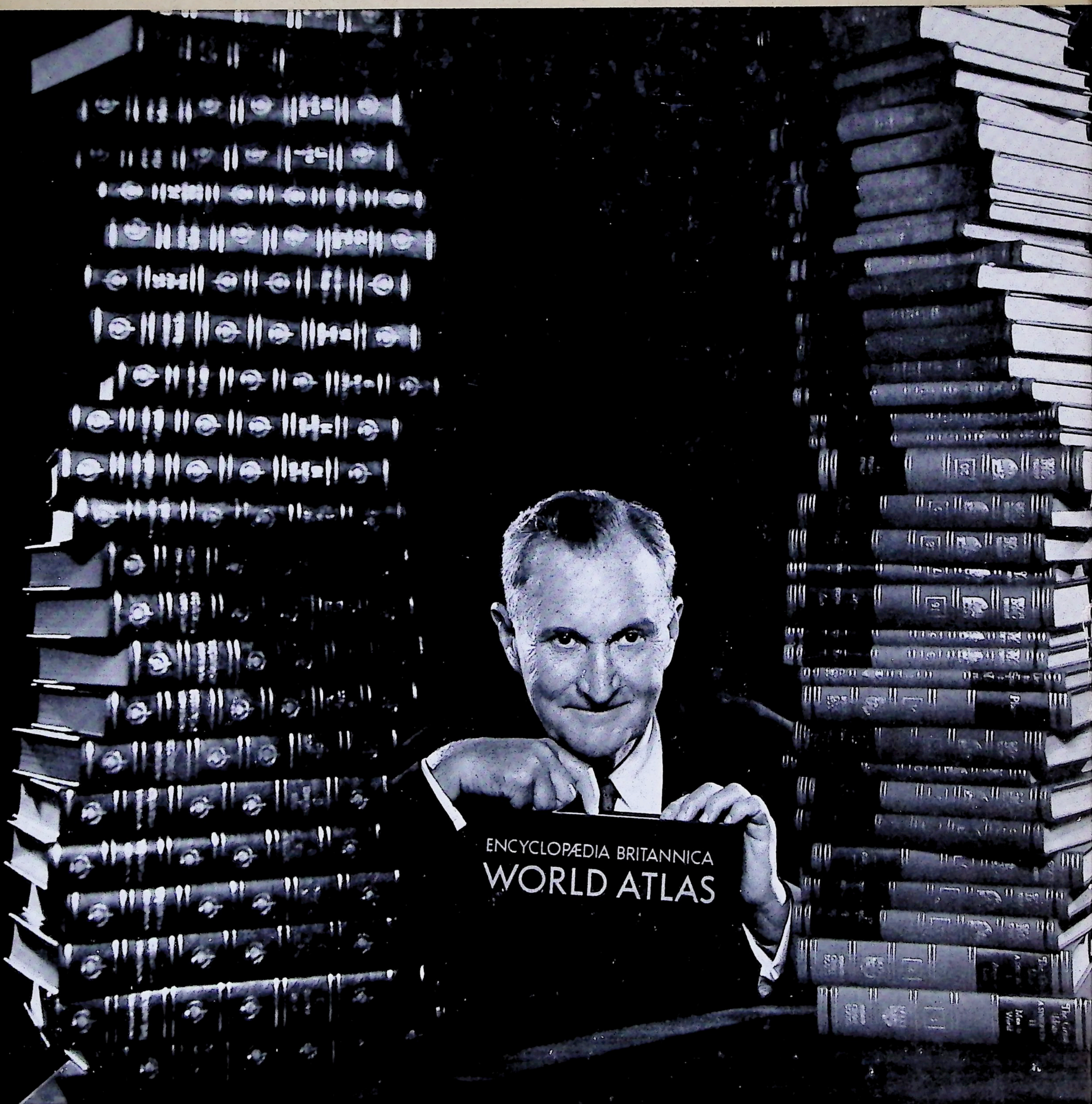


WISDOM

THE MAGAZINE OF KNOWLEDGE FOR LIFETIME LEARNING AND EDUCATION



ENCYCLOPÆDIA BRITANNICA PUBLISHER WILLIAM BENTON

Portrait by Karsh of Ottawa

LIMITED EDITION

WISDOM OF THE ENCYCLOPÆDIA BRITANNICA

AND OTHER TIMELESS ARTICLES MAGNIFICENTLY ILLUSTRATED

WISDOM

THE MAGAZINE OF KNOWLEDGE FOR LIFETIME LEARNING AND EDUCATION

LEON GUTTERMAN
EDITOR AND PUBLISHER

IN THIS ISSUE OF WISDOM

TRIBUTE TO BRITANNICA	1
THE STORY OF ENCYCLOPAEDIA BRITANNICA	2
BENTON OF BRITANNICA	50
WISDOM OF WILLIAM BENTON	58
FROM THE WISDOM OF ENCYCLOPAEDIA BRITANNICA	

The following articles, condensed from the "Encyclopaedia Britannica," were written by the world's greatest educators, scholars, and eminent authorities in every field of human knowledge.

ART

ART—CREATION OF BEAUTY	38
------------------------	----

EDUCATION

LIBERAL EDUCATION AND MODERN WOMEN	6
COMMON SENSE	13
WHAT IS AN EDUCATED MAN?	64

HISTORY

HISTORY, HISTORIANS, AND HISTORICAL EVENTS	24
--	----

LANGUAGE

SLANG—INFORMAL EXPRESSIONS OF LIFE	10
RHETORIC—ART OF PERSUADING PEOPLE	46

LITERATURE

PROCESS OF READING	43
--------------------	----

MEDICINE

DIAGNOSIS, DOCTORS, AND THE HUMAN BODY	28
--	----

MUSIC

MUSIC OF THE 20TH CENTURY	40
---------------------------	----

PHILOSOPHY

THE MEANING OF MEANING	9
PHILOSOPHERS ON IMMORTALITY	18
INTUITION	49

PSYCHOLOGY

PSYCHOLOGY OF THINKING	14
INTELLIGENCE	32
PERSONALITY	34
EGO	44

RELIGION

FAITH—REACHING BEYOND THE KNOWN	21
GENESIS—FIRST BOOK IN THE BIBLE	22

SCIENCE

LONGEVITY—PROLONGATION OF LIFE	27
--------------------------------	----

BETTY-JANE LANG, *Editorial Director*
HARVEY THOMPSON, *Art Director*

Volume 3—No. 30 June 1959

EXECUTIVE AND EDITORIAL OFFICES—8800 WILSHIRE BOULEVARD, BEVERLY HILLS, CALIFORNIA

WISDOM MAGAZINE, © Copyright 1959 THE WISDOM SOCIETY FOR THE ADVANCEMENT OF KNOWLEDGE, LEARNING AND RESEARCH IN EDUCATION, a non-profit educational publishing institution. ® Title and trademark registered United States Patent Office. Second-Class mail privileges authorized at Beverly Hills, California, Post Office. Additional entry Brooklyn, N. Y. Post Office. All rights reserved. This issue may not be reproduced in whole or in part in any form without written permission from the Publisher. Published every other month by The Wisdom Society. WISDOM is available only by Membership in The Wisdom Society For The Advancement of Knowledge, Learning and Research in Education.

ANNUAL MEMBERSHIP: \$15—includes 1 year subscription to WISDOM MAGAZINE (United States, U.S. Possessions and Canada). Other Countries—\$25. Single copies \$3 to Members, \$5 to Non-Members direct from the Society. CHANGE OF ADDRESS: At least one month before a change is to take effect, please send us your name and new address (including your zone number) together with your complete old address and serial number from a mailing label. Duplicate copies cannot be sent. WISDOM does not accept, and is not responsible for loss or nonreturn of unsolicited manuscripts. [POSTMASTER: Send notification regarding undeliverable magazines to WISDOM MAGAZINE, 8800 Wilshire Boulevard, Beverly Hills, California.]



WISDOM PAYS TRIBUTE
TO THE
ENCYCLOPAEDIA BRITANNICA
AND ITS PUBLISHER
WILLIAM BENTON



The WISDOM MAGAZINE AWARD is bestowed upon William Benton by Leon Gutterman, Editor and Publisher, for "Significant Contributions to Knowledge and Distinguished Service to Mankind."

THIS special edition of WISDOM takes pride in honoring the *Encyclopaedia Britannica* and its brilliant publisher, William Benton, on the publication of its new edition—an educational and literary event of tremendous importance.

For nearly 200 years the *Encyclopaedia Britannica* has enriched and ennobled the human mind and has been recognized the world over as the greatest single source of universal knowledge. It is the largest, most widely read, most authoritative and most complete reference work in the English-speaking world. It is written and illustrated by the world's greatest authorities in all fields of knowledge on every subject of human interest, giving intimate access to the great minds of all ages. *Britannica* is edited and published in America with the educational advice and consultation of the faculties of the University of Chicago and of a committee of members of the faculties of Oxford, Cambridge, and London universities.

Presenting mankind through the ages from the dawn of civilization to the miracles of modern science, and containing 3000 years of knowledge, the *Encyclopaedia Britannica* is essential in every home where learning and education is valued and respected, and is honored wherever the high pursuit of wisdom is honored.

With expressions of admiration and esteem, and in recognition of his devotion to the service of our country and his notable

humanitarian efforts in behalf of the peoples of the world, WISDOM is also proud to honor one of the most eminently successful and remarkable men of our time—William Benton—for his outstanding achievements as Publisher, Educator, Statesman, Government Adviser, Philanthropist, and Humanitarian.

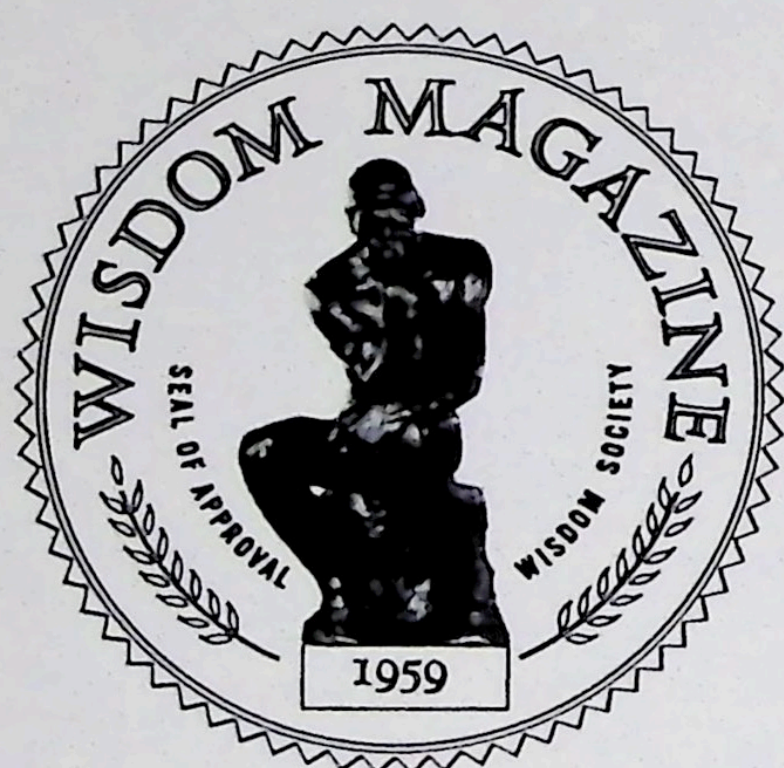
Recognized as one of the best minds of our age, William Benton is a profound thinker of great courage, creative imagination, intellectual and moral integrity. He has served America diligently with selfless dedication and devotion to public welfare, and to championing the cause of increased international understanding and world peace.

With bold and imaginative leadership, he has contributed greatly to American education by raising the intellectual horizon of the American people in the belief that in the education of people lies the ultimate hope for each nation and for a just and lasting peace among nations. With an unquenchable vitality, he has served the cause of human progress by marshalling dynamic ideas to strengthen human freedom, human decency, human rights, and the human mind. William Benton is an inspiration to us all. His name will ring through the ages as one of the great benefactors of mankind.

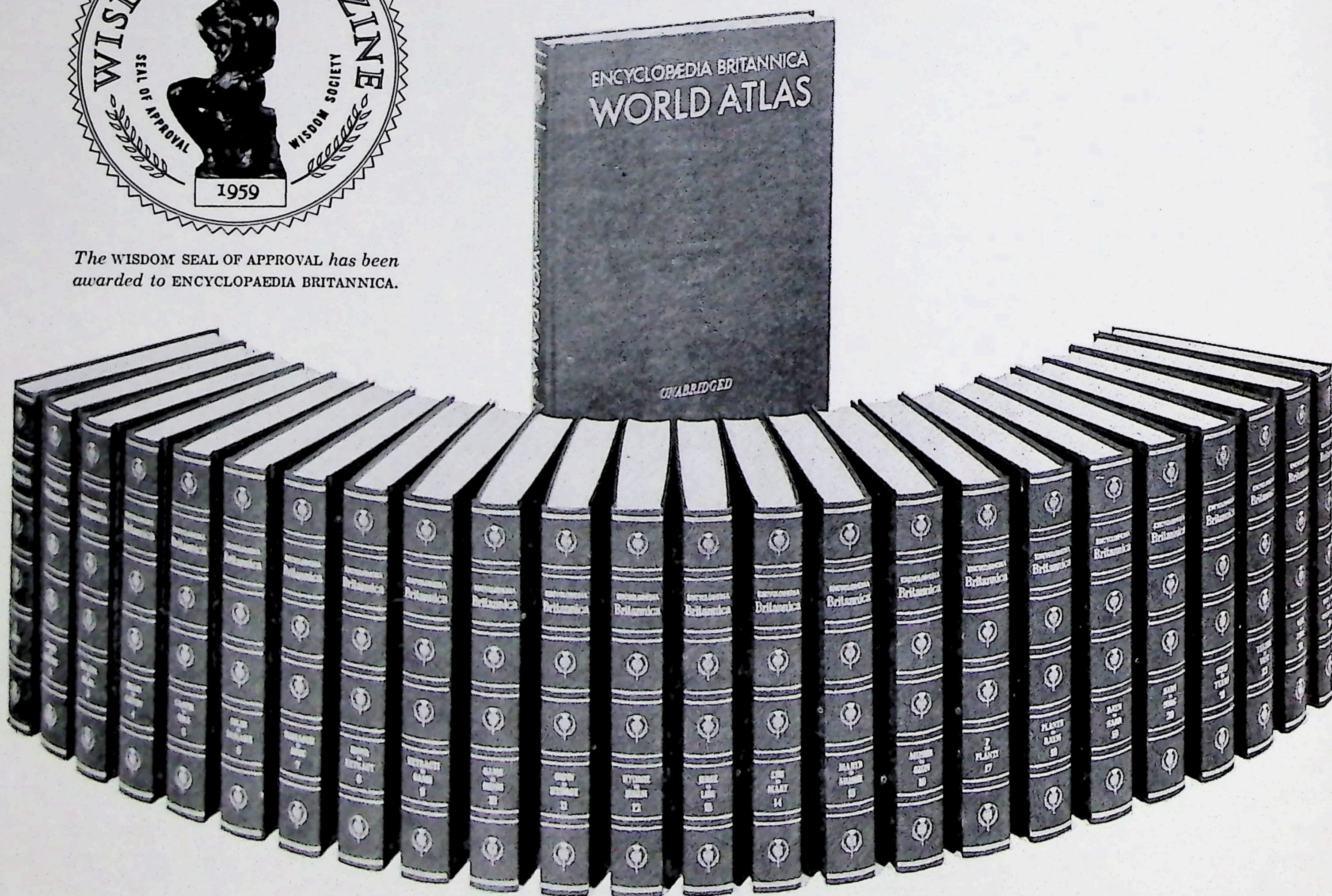
Leon Gutterman

THE STORY OF ENCYCLOPÆDIA BRITANNICA

from the Wisdom of Encyclopædia Britannica



*The WISDOM SEAL OF APPROVAL has been
awarded to ENCYCLOPÆDIA BRITANNICA.*



THE Greeks seem to have understood by "encyclopaedia" instruction in the complete system or circle of learning. The expression corresponds to the modern "general education." The earliest information concerning the organization of knowledge and of teaching signified by the term is found in Greek and Latin writers of the 1st and 2nd centuries A.D. Pliny, in the preface to his *Natural History*, says that his book treats all the subjects of the circle of learning of the Greeks, and the expression is used to refer to a general education or to a system of arts and sciences by Quintilian, Plutarch, Lucian and Galen. The word encyclopaedia was probably first used in English by Sir Thomas Elyot in *The Governour* in 1531: "the circle of doctrine, whiche is in one worde of greke Encyclopaedia." In his Latin dictionary, in 1538, Elyot defines "Encyclios et Encyclia, the cykle or course of all doctrines," and "Encyclopaedia, that lernynge whiche comprehendeth all lyberall science and studies." Its first appearance in French is in Rabelais' *Pantagruel* (1533). The term does not seem to have been used as the title of a book in antiquity or the middle ages. It was used in titles in the 16th century, but more frequently for pedagogical or philosophical treatises concerning the liberal arts than for reference books covering all knowledge.

Johann Alsted's *Encyclopaedia* (1630), on the other hand, is a compilation of information organized according to a classification of the arts, and treats of everything that can be learned by man in his life. The term "cyclopaedia" was also used and defended, but writers like Vossius, in the 17th century, argued that it is without classical authority and is incorrect etymologically.

From the 17th century to the present the word encyclopaedia was gradually restricted to mean a work that treats all the various kinds of knowledge. In the process, encyclopaedias were distinguished from pedagogical treatises on the arts and sciences and from dictionaries which define words rather than explain subjects. Pedagogical manuals were often called encyclopaedias in the 16th century; and encyclopaedias were often called dictionaries and lexicons in the 17th and 18th centuries. The term tended further to be restricted to reference books for information as distinguished from philosophical systems for speculation and technical compendiums for research.

In the 17th century the term was applied also to works that used all the sciences in application to a particular subject, as in Fortunius Licetus' treatises on antiquities. It is still attached to works that profess to be comprehensive treatises on particular subjects—such as encyclopaedias of wit, sport, agriculture, geography, technology, arts and manufactures, law and, more recently, social sciences and world literature—or of particular religions or cultures, such as Islamic, Catholic or Jewish encyclopaedias.

The *Encyclopaedia Britannica or Dictionary of Arts and Sciences*, "by a society of gentlemen in Scotland, printed in Edinburgh for A. Bell and C. Macfarquhar, and sold by Colin Macfarquhar at his printing office in Nicolson street," was completed in 1771 in three volumes containing 2,670 pages and 160 copperplates engraved by Andrew Bell. It was published in numbers, of which the first two were issued in December 1768, "price 6d. each, or 8d. on a finer paper," and was to be completed in 100 weekly numbers. It was compiled, as the title page says, on a new plan. The different sciences and arts were "digested into distinct treatises or systems," of which there are 45 with cross-headings (i.e., titles printed across the page) and about 30 other articles more than three pages long. "The various technical terms, etc., are explained as they occur in the order of the alphabet." "Instead of dismembering the sciences, by attempting to treat them intelligently under a multitude of technical terms, they have digested the principles of every science in the form of systems or distinct treatises, and explained the terms as they occur in the

order of the alphabet, with references to the sciences to which they belong." This plan, as the compilers say, differs from that of all the previous dictionaries of arts and sciences. The editor, William Smellie, a printer (1740–95), afterward secretary and superintendent of natural history to the Society of Scottish Antiquaries, is said by his biographer to have devised the plan and written or compiled all the chief articles. Archibald Constable, who was interested in the work from 1788 and was afterward intimately acquainted with Bell, says Colin Macfarquhar was the actual projector of the encyclopaedia and the editor of the first two editions, while Smellie was merely "a contributor for hire." George Gleig, in his preface to the third edition, says, "The idea had been conceived by him [Colin Macfarquhar] and his friend, Mr. Andrew Bell, engraver." Macfarquhar, according to Constable, was a person of excellent taste and very general knowledge, though at starting he had little or no capital, and was obliged to associate Bell, then the principal engraver in Edinburgh, as a partner in his undertaking.

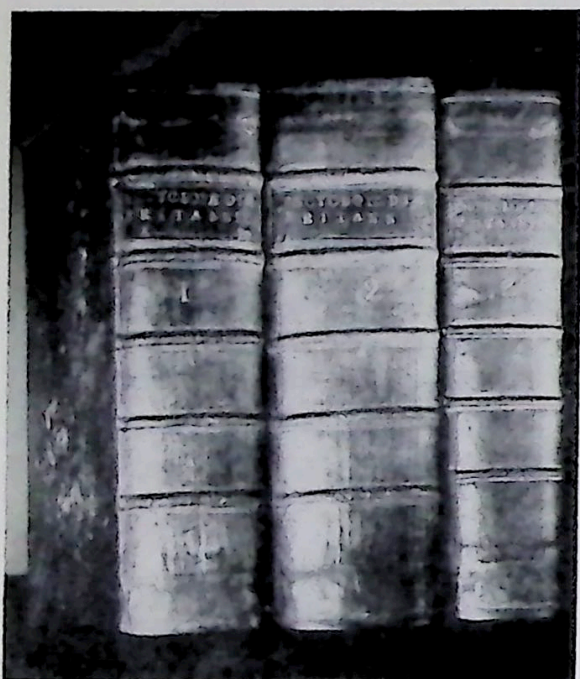
The second edition was begun in 1776 and was published in numbers, of which the first was issued on June 21, 1777, and the last, no. 181, on September 18, 1784, forming ten volumes dated 1778 to 1783 and containing 8,595 pages and 340 plates. The plan of the work was enlarged by the addition of history and biography, which encyclopaedias in general had long omitted. Smellie was applied to by Bell to edit the second edition and to take a share of one-third in the work; but he refused on the ground that the introduction of a system of general biography was inconsistent with the character of a dictionary of arts and sciences. James Tytler, M.A., seems to have been selected as the next most eligible compiler. Tytler (outlawed by the high court of justiciary in 1793, buried at Salem, Massachusetts, in 1805, aged 58) "wrote," says Watt, "many of the scientific treatises and histories, and almost all the minor articles."

After about a year's preparation, the third edition was announced in 1787; the first number was published early in 1788 and the first volume in October 1788. Among the multifarious articles represented in the frontispiece, which was required by the traditional fashion of the period, is a balloon. The maps are, as in subsequent editions, distributed among the articles relating to the respective countries. It was edited by Colin Macfarquhar as far as the article "Mysteries." In 1793 he died at the age of 48, "worn out" says Constable, "by fatigue and anxiety of mind." His children's trustees and Andrew Bell requested George Gleig of Stirling (consecrated on October 30, 1808, assistant and successor to the bishop of Brechin), who had written about 12 articles, to edit the rest of the work. James Hunter, "an active bookseller of no character," who had a shop in Middle Row, Holborn, sold the book to the trade, and on his failure Thomson Bonar, a wine merchant, who had married Bell's daughter, became the seller of the book. He quarreled with his father-in-law, who would not see him during the ten years before his death. When the edition was completed, the copyright and remaining books were sold in order to wind up the concern, and "the whole was purchased by Bell, who gave £13 a copy, sold all the complete copies to the trade, printed up the odd volumes, and thus kept the work in the market for several years."

The supplement of the third edition, printed for Thomson Bonar and edited by Gleig, was published in 1801 in two volumes. In the dedication to the king, dated Stirling, December 10, 1800, Gleig says: "The French *Encyclopédie* had been accused, and justly accused, of having disseminated far and wide the seeds of anarchy and atheism. If the *Encyclopaedia Britannica* shall in any degree counteract the tendency of that pestiferous work, even these two volumes will not be wholly unworthy of your Majesty's



William Smellie, one of the first editors of the "Encyclopaedia Britannica," and Andrew Bell, the engraver.



The First Edition of the "Encyclopaedia Britannica" was a three-volume set published in 1768 in Edinburgh, Scotland, contained 2670 pages and was illustrated with 160 copperplates.

Title page of the First Edition of the "Encyclopaedia Britannica," published in 1768.

Encyclopædia Britannica;

OR, A

DICTIONARY

OF

ARTS and SCIENCES,

COMPILED UPON A NEW PLAN.

IN WHICH

The different SCIENCES and ARTS are digested into distinct Treatises or Systems;

AND

The various TECHNICAL TERMS, &c. are explained as they occur in the order of the Alphabet.

ILLUSTRATED WITH ONE HUNDRED AND SIXTY COPPERPLATES.

By a SOCIETY of GENTLEMEN in SCOTLAND.

IN THREE VOLUMES.

VOL. I.

EDINBURGH:

Printed for A. BELL and C. MACFARQUHAR;
And sold by COLIN MACFARQUHAR, at his Printing-office, Nicolson-street.

MDCCLXXI.

attention." Thomas Thomson wrote "Chemistry," "Mineralogy" and other articles, in which the use of symbols was for the first time introduced into chemistry.

The fourth edition, printed for Andrew Bell, was begun in 1800 or 1801 and finished in 1810 in 20 volumes, containing 16,033 pages, with 581 plates engraved by Bell. No articles were reprinted from the supplement, as Bell had not the copyright.

Andrew Bell died in 1809, and a fifth edition was begun immediately after the fourth as a mere reprint. Bell's trustees mismanaged the new edition so badly that, after the issue of five volumes, both the stock and the copyright were sold to Constable, who paid between £13,000 and £14,000.

The sixth edition, "revised, corrected and improved," appeared in half-volume parts, price 16s. in boards, volume xx, part ii completing the work in May 1823. Constable, thinking it not wise to reprint so large a book year after year without correction, in 1820 selected Charles Maclaren (1782-1866) as editor. "His attention was chiefly directed to the historical and geographical articles. He was to keep the press going, and have the whole completed in three years." A new edition in 25 volumes was contemplated, not to be announced till a certain time after the supplement was finished; but Constable's house stopped payment on January 19, 1826, and his copyrights were sold by auction. Those of the encyclopaedia were bought by contract, on July 16, 1828, for £6,150, by Thomas Allan, proprietor of the *Caledonian Mercury*, Adam Black, Abram Thomson, bookbinder, and Alexander Wight, banker, who, with the trustee of Constable's estate, had previously begun the seventh edition. Not many years later Black purchased all the shares and became sole proprietor.

The seventh edition, 21 volumes (with an index of 187 pages), containing 17,101 pages and 506 plates, edited by Macvey Napier, assisted by James Browne, LL.D., was begun in 1827 and published from March 1830 to January 1842.

The eighth edition, 1853-60, 21 volumes (and index of 239 pages, 1861), containing 17,957 pages and 402 plates, with many woodcuts, was edited by Thomas Steward Traill, professor of medical jurisprudence in Edinburgh university. This edition was not wholly reset like the seventh, and many long articles were retained almost or entirely intact.

The publication of the ninth edition (A. and C. Black) was commenced in January 1875 under the editorship of Thomas Spencer Baynes until 1880 and subsequently of W. Robertson Smith, and completed in 1889, 24 volumes, with index. This great edition retained a certain amount of the valuable material in the eighth but was substantially a new work; and it was universally acknowledged to stand in the forefront of the scholarship of its time. Its contributors included the most distinguished men of letters and of science.

The sale of the ninth edition by its publishers from 1875, when the first volume appeared, until 1898, a period of 23 years, was about 10,000 sets. The authorized American distributors, Charles Scribner's Sons, sold in the United States 45,000 sets of the genuine ninth edition. At that time, however, so far as the United States was concerned, there was no international copyright. Any enterprising American was at liberty legally to appropriate a work published abroad and reissue it in the United States as his own property. The ninth edition presented a tempting morsel to a number of publishers and consequently several hundred thousand sets of mutilated and fraudulent ninth editions were sold in the United States before the courts intervened and the bogus plates were finally melted down and the fraud ended.

In 1897 four Americans united to form a company to push the sale of *Encyclopaedia Britannica* throughout the world. One of the four, Horace E. Hooper, representing the company, concluded

a contract with A. & C. Black, Ltd., for the printing of 5,000 sets and a contract with the *Times* of London for the sale through and in the name of that influential paper. The sale began in March 1898 and was successful. The first sale was almost immediately followed by a second, and a third, and a fourth, and for the first time in its history *Encyclopaedia Britannica* was distributed in considerable quantities not only in Great Britain and the United States but to the ends of the earth.

Of the company of four, Hooper and Walter M. Jackson were in London. The other two partners remained in the United States and in 1900 sold their half-ownership to Hooper and Jackson. On May 9, 1901, Hooper and Jackson purchased from A. & C. Black, Ltd., all rights, copyrights, plates, manuscripts, etc., of *Encyclopaedia Britannica*.

At that time work had been in progress on the supplementary volumes which appeared in 1902. Following the old Scots custom these 11 new volumes, added to those of the ninth edition, comprised 35 volumes in all.

In 1903 work was begun on the 11th edition, with Hugh Chisholm editor in London and Franklin Hooper, American editor. This edition bore the imprimatur of Cambridge university through an arrangement devised by Horace Hooper. The university received royalties on sales and exercised a certain amount of editorial supervision. The edition was issued in 1910–11 in 29 volumes, one being the index. During the period of editorial composition Horace Hooper purchased the Jackson interests in the property and by 1915 was sole owner, barring a few qualifying shares, of both the U.S. and British companies.

On February 24, 1920, *Encyclopaedia Britannica* was bought by Sears, Roebuck and company, largely because of the interest which Julius Rosenwald, the philanthropist, then head of that company, had taken in the work.

In spite of supplementary volumes, the 12th and 13th editions were actually the old 11th edition, which had been printed without revision for almost a quarter of a century. Moreover, work on the 11th edition having been begun as early as 1903, many of the contributions were at most seven years old before that edition appeared in 1910. A brand new 14th edition was indicated.

The sum of approximately \$2,500,000 was invested in the assembling and promotion of the 14th edition. It was edited by J. L. Garvin in London and Franklin Hooper in New York, and it took approximately three years to complete this work. More than 3,500 distinguished men and women of all nationalities contributed articles. The set of 24 volumes, one of which contained an index and a complete atlas, was published in September 1929, on the eve of the great depression.

The long history of *Encyclopaedia Britannica* had been a series of fat and lean periods. Once a new edition of the books had been completed, the editorial staff was disbanded and a distributing organization created. Sales, for a time, were generally good. This was the fat interval. For 10 to 20 years the same numbered edition was printed without any revision of its contents. Soon the age of the set was noted, and fewer and fewer sales were made. In order to prepare a completely new edition, or even supplementary volumes, it was necessary then to organize a new editorial staff.

Once the new edition was in process the fact became publicly known and the sales of the then current edition ceased and the selling department was disbanded. Vast sums of money had to be expended to cover the editorial costs. This was the lean interval, and because it required from 3 to 14 years to make a new edition, the lean interval was a long, hard one. The traditional method of publishing—which tolerated only a sales organization or an editorial staff but never the two together—was not only inefficient and uneconomical but often financially and editorially disastrous.

In 1933, E. H. Powell, at that time secretary and treasurer of Sears, Roebuck and company, was appointed president of *Encyclopaedia Britannica, Inc.*, and began the formulation of a plan which would permit the maintenance, year in and year out, of the sales and operating division of *Encyclopaedia Britannica* by creating continuously the financial reserve necessary to keep the volumes always timely and always salable.

The editorial problem was solved first by dividing all the 41,000 articles in *Encyclopaedia Britannica* into a number of broad classifications. These classifications were scheduled for complete revision at varying intervals over a period of ten years so that each article would be reviewed and revised if necessary, at least two times during that period. It meant that *Encyclopaedia Britannica* would no longer be issued in numbered editions; that new printings would be made each year and only enough sets printed to meet the year's demand; that *Encyclopaedia Britannica* would be revised, in part, annually under a rigid classification schedule; that, consequently, the material in each annual printing of the encyclopaedia would be more current than the material had ever been in any of the earlier numbered editions, and that, therefore, the books would always be salable.

As adjuncts to the policy of continuous revision and to aid in keeping *Britannica* owners well informed, two important new services were developed. One was the issuance of a 1,000,000-word volume called *Britannica Book of the Year*, which covers the significant developments of the year preceding publication. The first of these annuals was issued in 1938, edited by Franklin Hooper, who had been made editor in chief of *Encyclopaedia Britannica* in 1933. The other innovation for keeping *Britannica* subscribers fully informed was the organization in 1939 of a special department of library research. This service supplies subscribers on request with information not included in owners' sets of *Encyclopaedia Britannica* or in their copies of the *Britannica Book of the Year*.

Several other *Britannica* publications were begun in the 1933–43 decade. Important among these was a 12-volume encyclopaedia for children of elementary-school age called *Britannica Junior*. Revised completely in 1947 to appear in 15 volumes, it was revised continuously in great part thereafter. Another was *The March of Man*, a chronological record of people and events from prehistoric times to 1934 in the form of a historical atlas and comparative time charts. A third was the *Encyclopaedia Britannica World Atlas*, first published in 1942 and distinguished particularly for the extensive geographical summaries prepared under the direction of G. Donald Hudson.

Late in 1941 Gen. Robert E. Wood, chairman of the board of directors of Sears, Roebuck and company, offered all rights to *Encyclopaedia Britannica* as a gift to The University of Chicago. William Benton, then a vice-president of the university, facilitated the acceptance by supplying working capital for operation of the firm. By 1943 the transfer was effected.

The university's interest in *Britannica* enterprises is direct and active, although it assumes no management authority or responsibilities. *Encyclopaedia Britannica* "is published with the editorial advice and consultation" of its faculties and of "a committee of members of the faculties of Oxford, Cambridge and London universities." As in the case of Cambridge university and the 11th edition, mentioned above, The University of Chicago was allocated a royalty on sales. William Benton became chairman of the board of directors of *Encyclopaedia Britannica, Inc.*, and majority stockholder and Robert Maynard Hutchins, former chancellor of The University of Chicago, chairman of the board of editors. Walter Yust, who began with the company in 1930, remained editor-in-chief of *Encyclopaedia Britannica* and the company's other publications. ♦



Prima ballerina Margot Fonteyn.



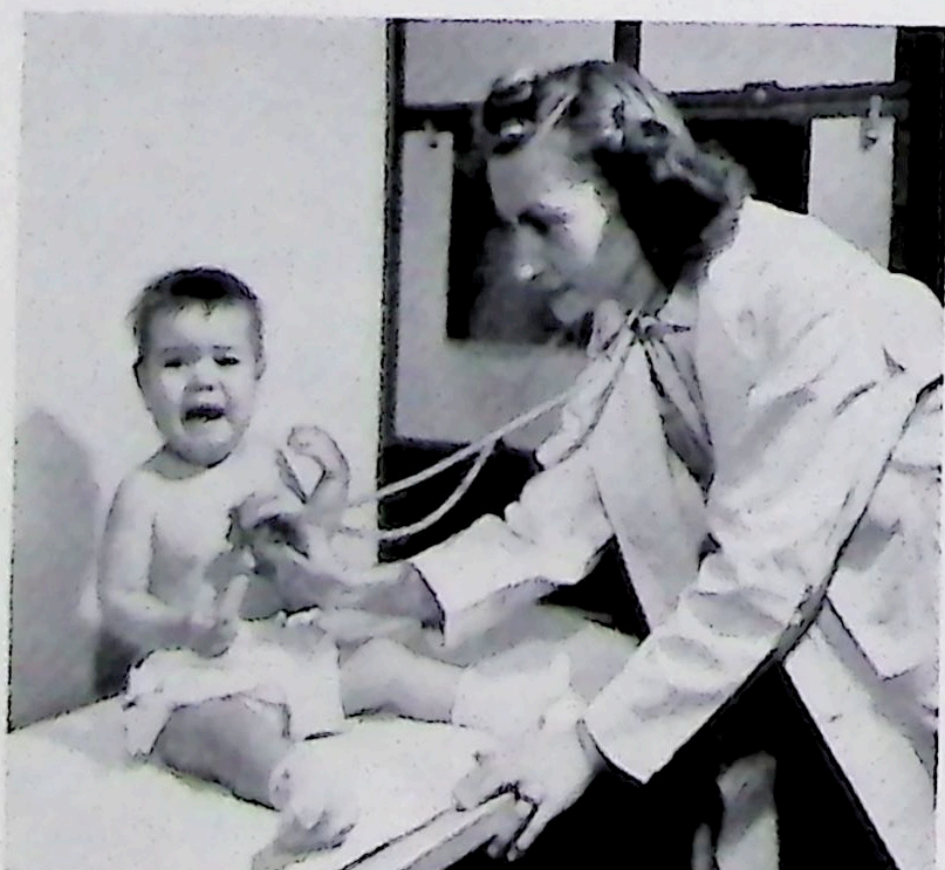
*Colonel Oveta Culp Hobby,
Director of the WAAC during
World War II.*



*Playwright-journalist-
congresswoman Clare Boothe
Luce, former U.S. Ambassador
to Italy.*

LIBERAL EDUCATION

*Engineer Emma B. Beech, President of
Beech Aircraft Corp.*



*Women are the books, the arts, the academies, that show, contain,
and nourish on the world.*
—SHAKESPEARE

*Women doctors scientifically protect
new lives.*



Women scientists are reaching high levels of achievement in medicine and chemistry.

from the Wisdom of Encyclopædia Britannica

THE 19th and 20th centuries brought a revolution in the status and education of women, first sweeping Europe and the United States, then the orient, and reversing ancient judgments of women's aptitudes.

Hebraic-Christian ethics elevated woman morally. The Renaissance gave upper-class women Greek and Latin classics. The Reformation stressed reading the Bible in the vernacular, and joined with rising nationalism to prepare the way for universal basic education. The technological revolution displaced age-old domestic crafts with factory production, took women outside their four walls and gave them cash instead of "keep." A rising middle class, growing affluent through commerce and industry, gave daughters an education of accomplishments, and occasionally something more substantial.

In the 19th century, seminary, college and university provided pragmatic proof that girls, like boys, could master the known and explore the unknown. New sciences, notably biology, psychology, anthropology and a naturalistic philosophy of education, shed fresh light on likenesses and differences of male and female, but offered no confirmation of the alleged inferiority of women. Political liberalism, resting on a naturalistic premise, opened the way to participation in government. World wars and ensuing revolutions augmented changes already in progress, broadened the scope and accelerated the tempo.

The original source of woman's restricted sphere of activity and dependence lay in her biological function and a less agile, smaller and weaker body. Bound by a shorter tether, she shared the labor of primitive societies, but hers was near at hand while man's took him far afield. The societies of the great river valleys of the east and those of the Mediterranean exhibit, similarly, a differentiation of roles of men and women; but, although women of the lower orders labored as had their primitive sisters, wealth and class structures and functions facilitated a degree of seclusion and subjection of upper-class women which generally left them without significant labor or public function. Such women had little education, save that befitting their narrowed sphere; being unlettered, they seemed to have inferior minds. When man began to philosophize, he explained the inferiority of woman: "A woman without ability is normal," said the Chinese. Hindus considered "infidelity, violence, deceit, envy, extreme avarice, a total want of good qualities, with impurity" the natural faults of woman. Aristotle saw women's virtue in obeying, being less complete, less courageous, weaker, more impulsive than men. In theory views differed. Plato thought some women could be philosophers; he admitted a few to his academy. Musonius and Seneca believed women talented, even for philosophy. But learning opened no office or respected profession to women.

Christianity credited women with souls equal, in the sight of God, to those of men. The full benefit of this moral status was

AND MODERN WOMEN



World acclaimed violinist, Erica Morini.

long deferred, however, for Christian ascetics waged war against worldly aesthetic, intellectual and physical culture, and for maximum discipline of the soul fled to monastery and nunnery. The restricted education of girls was described by St. Jerome. Although limited, and though one must leave normal life to win it, nunneries opened for women a path to letters, and administrative posts as abbesses. England had about 140 nunneries in the late middle ages, exclusive of "double houses." But nuns were only a small fraction of the female population, and came chiefly from the upper classes. Lower-class women carried on the world's work with men. High social status, in Europe as elsewhere, kept women from the world of labor. Cathedral school and university, the highest institutions of the middle ages, led to the supreme profession, theology—closed to women. Had not St. Paul advised women to be silent in church?

Though colonial New England generally excluded girls from town schools, their entrance being considered "improper and inconsistent," dame schools received them. A few towns specifically admitted girls. The 18th century saw a change. Boston provided for both sexes in 1789. In the central colonies churches generally gave elementary education to both sexes. Latin grammar schools were not for girls. Private schools developed in the 18th century, however, notably in Philadelphia, New York City and Boston. Their proprietors, men and women, taught whatever anyone, male or female, wanted to learn. Most of them taught girls accomplishments; others, venturing upon solid subjects, gained public esteem. John Poor's school (Philadelphia), offering reading, writing, arithmetic, English grammar, composition, rhetoric and geography, was chartered on January 9, 1792. Public high schools began (Worcester, Massachusetts, 1824) the slow process of making secondary education free, an end not widely realized till after 1870. By 1900 girls in public high schools numbered 317,146; boys 224,584.

From 1825 to 1875 many efforts were made to found women's colleges. Certain better seminaries—Troy Female seminary, Troy, New York, founded by Emma Willard (1821), Mount Holyoke, South Hadley, Massachusetts, begun by Mary Lyon (1837), and Milwaukee Female seminary (later Milwaukee-Downer college), Milwaukee, Wisconsin (1851)—later became colleges. Georgia Female college, Macon, Georgia (1839), Mary Sharp, Winchester, Tennessee (1851), Elmira, Elmira, New York (1855), and Vassar, Poughkeepsie, New York (1865), laid serious claim to collegiate rank. Elmira and Vassar fully merited the name; only Vassar had generous support. When Smith college, Northampton, Massachusetts, and Wellesley College, Wellesley, Massachusetts, opened (1875), success of collegiate experiments was established. Coeducation began on the college level at Oberlin college, Oberlin, Ohio, where women entered college courses in 1837. Antioch college, Yellow Springs, Ohio (1852), gave women equal opportunities with men "in the same studies, and classes, and by the same instructors." Women were to be teachers as well as students. In state universities coeducation was the rule initially or soon became so. The State University of Iowa, Iowa City (1856), was coeducational. The University of Wisconsin, Madison (1850), proposed a normal department, opened to women and men, first attended by women in 1860; collegiate coeducation was realized after 1872. By 1900 there were 26,728 women college students, 8,104 graduates.

Fear had been felt that women were too weak to stand the strain of serious mental labor. College and seminary demonstrated that they could master Euclid, Greek and Latin without losing their health or their minds. Another fear—college for women would mean race suicide, they would not marry or, if they did, would not have children—was soon laid. Thorough study showed marriage and fecundity were conditioned by wealth and social status rather than by classics and mathematics.

Entrance to higher professions was as difficult as getting into college—or more so. Teaching was the first profession to admit women. Women were too weak to handle discipline, it was said; and they were, as long as schools were ruled by the rod. But the common schools demanded more teachers, and women were the readiest source. From seminaries, then from normal schools (a private experiment, 1823, and state institution, 1839), women went rapidly into a profession, highly praised, poorly paid.

Entrance to medicine, law and theology was more difficult than teaching. If one could get training, medical societies, bar associations, churches and the public were hostile to women practitioners. In medicine a minor step was taken in Philadelphia (1765) when William Shippen, Jr., gave lectures on midwifery "to women who had virtue enough to own their ignorance." Almost a century later Elizabeth Blackwell sought in vain to enter first-class medical schools. Accepted, finally, at Geneva college, Geneva, New York (1847), she took a degree (1849) and finished her medical preparation abroad.

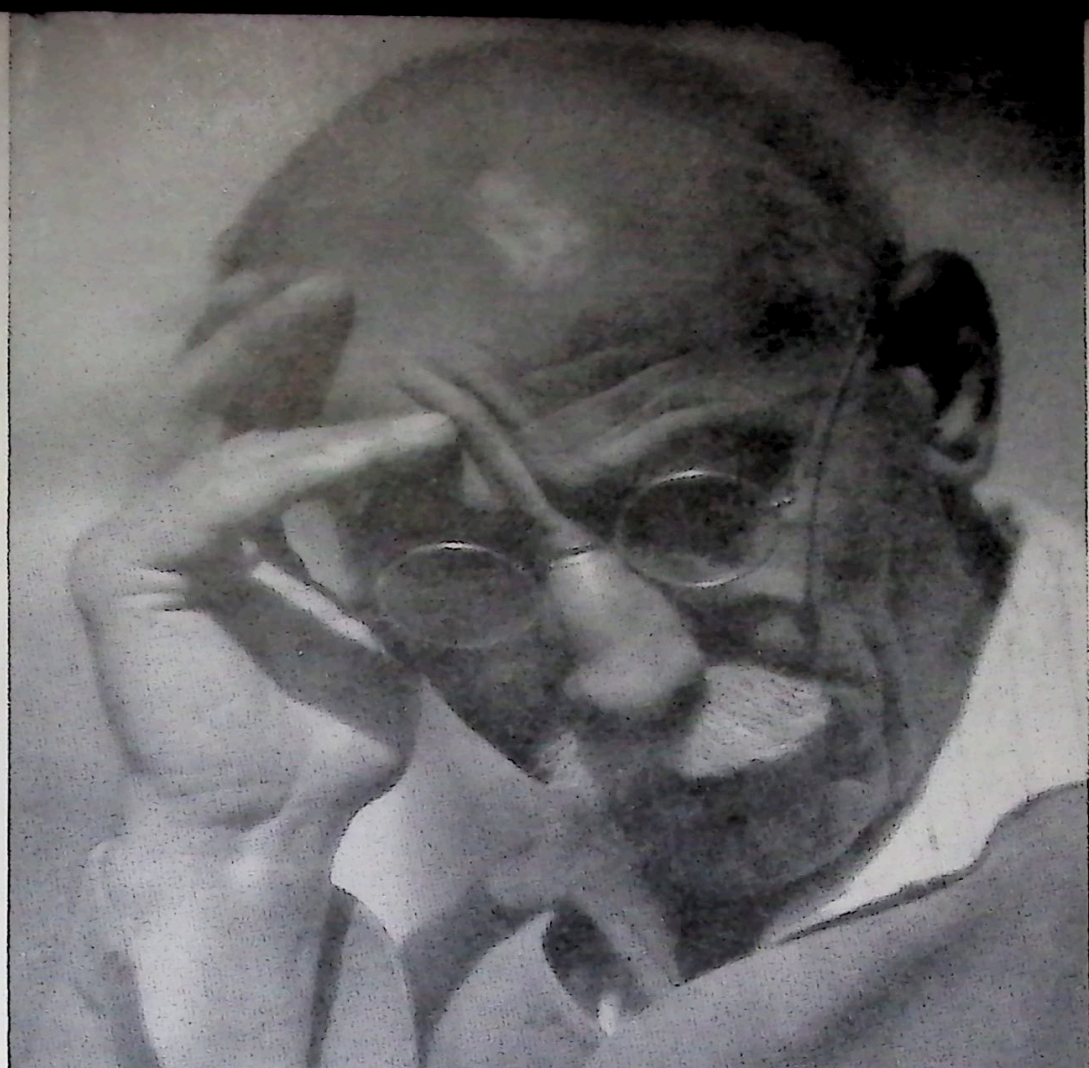
As old institutions refused admission, special schools for women developed. Encouraged by friendly doctors and the Female Medical society, lectures began (1848) in Boston at the New England Female Medical college (1852) which later became part of Boston university. The Female Medical College of Pennsylvania, Philadelphia, incorporated March 11, 1850, was the first institution so recognized in the United States. Progress was slow. Women studying medicine (1891) numbered 1,302; men, 18,514. In 1950 women won 584 M.D. degrees, men, 5,028; in medical sciences there were 729 and 2,495 degrees, respectively.

The law offered many obstacles, since training was generally in private offices. Growth of law schools benefited women. Lemma Barkaloo studied law in Washington university, St. Louis, Mo., in 1869. Ada Kepley received a degree from Union Law college, Chicago, in 1870. The University of Pennsylvania, Philadelphia, admitted women in 1881. Law schools almost doubled from 1870 to 1890; by 1900 there were 94, with 151 women and 12,365 men; in 1920 there were 19,821 men, 1,171 women. After a strenuous fight Myra Bradwell won the right to practise when Illinois (1872) forbade disbarment from any profession, other than military, on grounds of sex. Bella Lockwood, admitted to the supreme court of the District of Columbia (1873), was refused admission to the United States Court of Claims and the United States Supreme Court. Finally, a bill (1879) enabled women to practise before the highest tribunal.

Postgraduate study met little opposition. Graduate schools, being new, generally welcomed both sexes, though a belief prevailed that women, while they could master the known, would not be capable of original investigation. By 1900 women in graduate departments numbered 1,982, men, 4,883.

Having found that women could master traditional college studies, a concern arose as to what the higher education of women really should be. Do traditional studies suffice? Causes of the query lay in economic pressures, specialization dictated by scientific and technological development and decline of faith in the mental discipline once credited to Greek, Latin, mathematics and science. Some women's colleges sought to hold fast to the ancient disciplines; most of them, however, revealed the influence of vocational demands. Two, Sarah Lawrence college, Bronxville, New York (1928), and Bennington college, Bennington, Vermont (1932), broke boldly with tradition, giving first place to development of persons according to interests and needs—an application of John Dewey's philosophy.

Great progress has been made in many lands in the past generation, but education is still less accessible to women than to men, except in primary schools. ♦



THE MEANING OF MEANING

from the Wisdom of Encyclopædia Britannica

THE term "meaning" is used in many different senses. These may be divided into three principal types: (1) meaning as index or symptom of some occurrence; (2) meaning as intent or purpose of a deliberate action; (3) meaning as whatever is referred to, signified, or expressed by words or other symbols.

1. We use the term in the first of these three senses when we say that increased government spending means higher taxes; a falling barometer means rain; blushing means embarrassment; a certain kind of footprint in a slab of stone means that a dinosaur once walked there. In cases of this sort, the statement that one kind of fact or event, A, means another, B, is tantamount to the assertion that B is often or always associated with A, so that an occurrence of A affords more or less strong grounds for the presumption that B has occurred or will occur. Here, then, A means B in the sense that A is a symptom or an index for B.

2. The meaning of a deliberate act performed by an individual or a group—such as a specific move made by a chess player, or a decision arrived at by a planning board—is often construed as the purpose that the act is intended to serve; and individual or collective behavior is then said to be meaningful insofar as it is governed by specifiable purposes. This second conception of meaning is sometimes extended, in a more or less metaphorical manner, to occurrences that do not in any clear sense constitute deliberate acts; this is the case, for example, when we speak of the meaning of history or the meaning of life.

3. The concept of meaning has its most important applications, however, in reference to the use and function of symbols; these may be words or more complex expressions—including sentences—of a spoken or written language, or such devices as flag or smoke signals, traffic lights, road markings, the sound signals produced by an air raid warning siren, etc. Speaking very generally, the meaning of a symbol is whatever the symbol is intended or understood to refer to or signify or express. The meaning of the "all clear" siren signal, for example, is at least twofold: it conveys the information that the immediate danger is over, and it transmits an order to return to normal activities. Similarly, a sentence or a passage consisting of several sentences may be the carrier of various meanings. Thus, (a) it may have *cognitive meaning*, i.e., convey (true or false) information, as do, for example, the statements of mathematics and empirical science; (b) it may have *directive meaning*, i.e., convey an order, request, or injunction, as do, for example, the Ten Commandments; (c) it may have *emotive meaning*, i.e., express or evoke (rather than describe) a mood or attitude, as do some kinds of poetry; and (d) it may combine these and other kinds of meaning, as does, for example, a political speech or a newspaper editorial. The meaning of an expression will usually depend on, and vary with, the circumstances under which it is used and the psychological make-up of the individuals who produce it or take account of it (e.g., the writer and his readers). That branch of semiotics, i.e., the general theory of signs, which is concerned with the study of meaning in this broad sense is called pragmatics.

For the purposes of logic and of certain parts of linguistics—including the construction of dictionaries—it is useful to introduce a so-called semantical conception of meaning, which makes no explicit reference to the users of the symbols under study and construes the meaning of an expression simply as some object, attribute, or other entity represented by that expression. Two kinds of semantical meaning are usually distinguished: reference or denotation, and sense or connotation. The expressions "the morning star" and "the evening star," for example, have the same reference: both refer to, or denote, the planet Venus. But they have different senses; i.e., they refer to that planet by means of different characterizations. Similarly, the expressions "featherless biped" and "mammal endowed with speech" have the same reference, namely, all human beings; the class of the latter is said to constitute their extension. The two phrases have different senses, however; these are given by their intensions; i.e., the attributes—namely, that of being a featherless biped and that of being a mammal endowed with speech, respectively—whereby each phrase characterizes the entities to which it refers. Some expressions, such as "the largest glacier on Sicily," have a sense but no reference; they refer, or apply, to nothing. Expressions that have the same sense, such as "grandfather" and "parent's father," are said to be synonymous; such expressions always have the same reference. A customary way of stating the meaning of a word or phrase is to give a definition that provides a synonym for it and thus exhibits its sense; and dictionaries often indicate the meaning, or meanings, of an expression by listing approximate synonyms for the principal linguistic contexts in which it occurs. Expressions which like the word "meaning," have several distinct senses are called ambiguous.

A symbol which, like a hyphen or the words "it" and "very," has no sense in isolation, but may occur as a constituent of certain other expressions that do have sense, is said to be syncategorematic. Just what kinds of words or phrases may be said to have a sense in isolation is a matter of dispute in logic; and, indeed, some logicians hold that the very notion of sense—in contradistinction to that of reference—is so unclear and problematic as to make its value for precise logical and linguistic studies highly questionable. ♦



Slang is just sport-model language stripped down to get more speed with less horsepower. —T. T. TINKLE

SLANG

the informal expressions of everyday life

from the Wisdom of Encyclopædia Britannica

SLANG is an informal and colloquial variation of or addition to standard speech. It may be a variation in any element of a language—in its sounds (“atta girl”), in its stress (“positively”), in its intonation (“Is that so?”), in its syntax (“We was robbed”); but it is in vocabulary (“spiv”) and meaning (“She’s a peach”) that slang is commonest.

Slang is formed by normal linguistic processes found in all living languages, processes such as compounding (“low-down,” “sob-stuff”), word clipping (“pro,” “mike,” “pix”), abbreviation (“o.k.,” “v.i.p.,” “snafu,” “q.t.”), onomatopoeia (“boom,” “whiz,” “bang”), generalization of proper names (“bobby,” “guy,” “real McCoy”), borrowing from dialects and foreign languages (“vamoose,” “savvy,” “pronto,” “loco”) and extension of meaning

by analogy (“Park your hat,” “He got pickled”).

People belonging to the same social group—of the same trade, profession, hobby, age or social position—tend to behave in the same way. This behavior influences not only the clothes they wear but also the language they use. The language of a social group, particularly its slang, is one of several forms of behavior that keep the group distinct from other groups.

One of the commonest social groupings is that of people who work together. Students have their “lab” and their “gym.” Second-hand car dealers have their “creampuffs” (excellent cars) and their “dogs” (dilapidated ones). For an order of poached eggs on toast a waitress may tell the cook to “drop two on.” To a television producer a poor show may be a “wart.” A circus “geek” (conditioned freak) can use a “stick” (decoy) to attract a “tip” (prospective customer); but this is not the same sort of tip that a hotel porter might expect from a “front” (inexperienced traveler). A professional flyer may wear a “brain bucket” (crash helmet) in case he has to “buy a farm” (crash); but his “soup” (horsepower) has nothing to do with the “soup” (nitroglycerin) of the professional safe-cracker. “Cat” does not refer to the same thing in the underworld as it does in the jazz world. Yet both underworld and jazz slang formed the basis of much of the “teen talk” of the 1950s.

Some social conditions are more favorable than others to the creation of slang. Excitement, crowding and the sudden regrouping of people for a particular purpose, as in wartime, may result in the formation of a large number of slang words. This goes on from person to person, from ally to ally and from one side to the other. All the participants learn things about the others, and all come out with larger vocabularies. Forceful expressions by the thousand are created and used by members of the armed forces. “Big Bertha” is remembered as the nickname of the long-range German cannon in World War I, immortalizing Bertha Krupp of the munitions family. The innocent-sounding “pineapple” of the same war was a hand grenade with markings suggestive of the fruit. World War II added another type of grenade, the “Molotov cocktail,” and a vast new vocabulary of slang including such words as “blitz,” “doodle-bug” and “walkie-talkie.” The Korean war also had its slang; Korean soldiers were known as “gooks” and as “ROKS.”

A few slang expressions have spread far beyond their original linguistic boundaries. This is the case of “o.k.,” the international sign of approval. Originally an American term, it has become a household word in languages throughout the modern world. There are a number of theories on the origin of this popular expression. One is that it stands for the nickname “Old Kinderhook,” meaning Martin Van Buren, eighth president of the United States, who was born and died at Kinderhook, New York. It was used by his supporters as early as 1840, and within a few years acquired its present meaning.

The witticism of a single person may be enough to launch a new slang form. The novelty may produce a response so effective that it is taken up by others and soon becomes widespread. The more it is used, the more popular it becomes, especially if it is used by associates or admired persons. But after much use the novelty wears off, and the expression, having no special effect and therefore no further function, dies out. If, however, the older form or its central meaning has in the meantime gone out of fashion, the slang expression may remain in use as the normal form.

When literary men in the 17th century wrote about the “common people” they often used a Latin expression, *mobile vulgus*, meaning the fickle or movable crowd. Sometimes in writing this was abbreviated to *mob. vulg.* Later the *vulg.* was dropped, and careless writers began to use *mob.* alone, still pronouncing it in full, *mobile*. The next step was to say simply *mob*, which was considered shockingly low and regarded as the crudest type of slang. The usage persisted,

and in the 18th century "mob" became tolerated in conversation, although not in writing. Early in the 19th century came another promotion, and the word, at long last, entered the ranks of standard English. A similar process was responsible for about 2% of English "dictionary" words; such words as "trip," "bet," "donkey," "shabby," "chap," "bore," "cab" and "kidnap" were once condemned as slang.

Some words may remain as slang for centuries, neither disappearing nor becoming part of the standard vocabulary. Such is the case of the medieval "booze," the Elizabethan "rook" (verb) and the 18th-century "swop." The same applies to certain expressions such as "dead as a doornail," which was used in the 14th century and may have been old even then. In the 16th century, Shakespeare, in *Twelfth Night*, wrote "laugh yourselves into stitches." In the 17th century George Fox, founder of the Quakers, wrote about a professional man who had "done his stuff," proving early currency for another expression still in use.

Yet for every slang expression that has lived, hundreds of others have died. "Gamp" was once the usual slang for an umbrella. It was named after a large, bulging umbrella carried by Sairey Gamp, a character in Charles Dickens' *Martin Chuzzlewit*, published in 1844. In the latter part of the 19th century it became a well-established colloquialism, but it was hardly important enough to last.

It is in the area of fundamental emotions that slang is most changeable and most productive. The slang of approval ("swell," "nifty," "bong," "zorch," "the end," "real dizzy") and disapproval ("phooey," "nuts," "boloney," "hogwash," "balderdash," "poppycock") may change within a generation. So may the words for woman and girl ("skirt," "biscuit," "swan"), and these are usually numerous in any generation. When a young man refers to his sweetheart as his "soul mate," his "steady," his "main dish," his "heavy" or his "onliest" he has hardly made a beginning; he could use a different expression every day for three years and still have words left over for variety. It is the same with money, which has unconventional synonyms by the bookful, including such picturesque terms as "berries," "cabbage," "chink," "ducats," "honey," "jack," "mazuma," "potatoes," "simoleons," "spondulics" and "wampum." The expression "to die" seems much too commonplace; a person is said to "drop off," "fade out," "go to grass," "go under," "go up," "go west," "kick the bucket," "ring down the curtain," "shuffle off" or "push the clouds," with probably a thousand variations. A person suffering from the effects of drinking to excess is said to be "afloat," "blowed," "boozy," "cockeyed," "corned," "disguised," "fractured," "groggy," "high as a kite," "ratty," "stewed," "vulcanized" or "zigzag." The idea of stealing is expressed in slang in many forms, some of them with a disarming suggestion of innocence, such as "promote," "salvage," "rustle" and even "liberate." Other synonyms, ranging all the way from "annex" and "appropriate" to "souvenir" and "freeze onto," would easily exceed the thousand mark. The same may be said of all fundamental words, the ones first used by children and by "primitive" people. They seem to seek synonyms—humorous, satirical, poetical, euphemistic or merely roughly descriptive—in slang.

Catch phrases, more or less related to slang, are of many kinds, ranging from the whimsical and witty to the meaningless and inane. Popular catch phrases in the 19th century included "Who stole the donkey's bed?" addressed to men wearing straw hats; "What a tail our cat has," a bantering reference to a woman's new dress; "Does your mother know you're out?" a supposedly funny remark of wide application. Many 19th-century examples were based on music-hall songs, as "Where did you get that hat?"; "Shoo, fly, don't bother me"; and "A hot time in the old town tonight." A similar specimen in the 20th century, "Yes, we have no bananas," might very well

have invited the retort "and no sense." Catch phrases still come and go, and still will bear study, for they tend to reveal the processes, mental or emotional, of the people who utter them.

Since one of the functions of slang is to prevent members of other groups from understanding what is said, it is not surprising that attempts have been made to create systems of slang to function as secret languages. These include such artificial types as rhyming slang, back slang and center slang. Rhyming slang was used by certain Cockney groups as early as 1840; it spread to the Australian underworld and in the 1950s became popular among the young "teddy boy" gangs in London and other English cities. In rhyming slang a wife becomes "trouble and strife," a road a "frog and toad" and a suit a "whistle and flute." This becomes even more secret when the rhyming word is omitted, whereby a road becomes a "frog," a suit a "whistle," a hat a "tit for" (tat) and mouth a "north" (and south). Back slang consists in saying a word backward with any alteration necessary to make it more pronounceable. In this way a game becomes an "emag," a market a "tekram," drunk "kennurd" and police "slop." In center slang, the first syllable of the slang word is formed from the first vowel of the standard word and the consonant that follows it; the other syllables may be made in a number of ways, either with fixed or free suffixes. To call a man a fool in center slang, such terms as "oolfoo," "oolerfer" and even "hoolerfer" could be used.

Since about half the world's English-speaking people are citizens of the United States, it is not surprising that world English shows traces of American influence. This influence, which tends to create variety but not disunity, extends into the field of slang. The Americanizing process has been aided by radio and films; but it should be pointed out that communication is a two-way street and that Americans have not been slow to import "Briticisms."

On the continent of Europe, slang was being recognized as early as the 12th century and studied at least as early as the 15th, when François Villon used it and probably added to it in some of his immortal ballades. A generation later, in Germany, Martin Luther wrote a preface to the 1529 edition of *Liber Vagatorum* (*Book of Vagabonds*) and gave his views on the vocabulary of vagabonds' slang featured in that work. Villon and Luther had one thing in common—they were both writers, and writers recognized, then as now, the strong human appeal of certain types of slang.

Some writers have condemned all slang, especially that of hostile classes. They have called it vulgar, corrupted, uncultured, secret and false, the dialect of the rabble, of beggars, of gypsies and of thieves. Others have praised slang as creative activity. In England the critic G. K. Chesterton said that "all slang is metaphor." In the United States the semanticist S. I. Hayakawa called slang "the poetry of everyday life." According to the scientific view, slang in itself is neither good nor bad. It is part of the natural growth of language. A living language must continually change, and some of the changes first appear as slang. Some slang makes the language capable of new and delicate shades of meaning or adds vividness, clarity and directness to everyday expressions. Other slang expressions are vague in meaning, cover too much ground or duplicate better conventional vocabulary. The use of slang is sometimes quite appropriate in informal writing, but it is usually out of place in formal, scientific or academic writing.

When Elisha Coles issued his *English Dictionary* in 1676, he explained the inclusion of a number of slang words and expressions by saying, "'Tis no Disparagement to understand the Canting Terms: It may chance to save your Throat from being cut, or, (at least) your Pocket from being pick'd." Reasons less ominous impel the modern student, who knows that from slang much can be learned about the history, customs, fashions, the very thoughts of people far away or long ago.

AMERICAN SLANG EXPRESSIONS

Attaboy (that's the boy), fine!
 Back number, superannuated
 Bag, to appropriate
 Balled up, confused; mixed up
 Ballyhoo, excessive praise
 Bang up, excellent
 Bat, a spree
 Bawl out, to rebuke sharply
 Bean, head
 Beanery, cheap eating place
 Beat it, to get out
 Beat the band, be very good
 Biff, to strike
 Big boy, a term of admiration
 Big cheese, the "boss" or chief
 Big shot, important person
 Blah, nonsense; piffle
 Blink (on the), out of repair
 Blooey (to go), to go to pieces
 Blowout, a party
 Blurb, publisher's advertisement
 Boloney, nonsense
 Bonehead, a fool
 Boob, a stupid person
 Boom, to promote
 Boost, a recommendation
 Bootlegger, illicit liquor dealer
 Booze, liquor
 Bottom dollar, last dollar
 Brain storm, idea
 Brass, impudence
 Break (to make a), faux pas
 Break even, neither win nor lose
 Breaks (to get the), to be in luck
 Buck, dollar
 Buddy, close companion
 Bull, police
 Bull (throwing the), boasting
 Bulldoze, to intimidate; to bully
 Bum, vagrant
 Bum's rush, throw out
 Bunk, nonsense; rubbish
 Butt in, interfere
 Buttski, one who interferes
 Call-down, a rebuke
 Call down (to), to correct
 Can, to discharge; to throw out
 Canned music, mechanical music
 Chase yourself, get out
 Cheap skate, a poor spender
 Chesty, puffed up; vain
 Chicken, cowardly
 Chicken feed, small money
 Cinch, a sinecure
 Classy, handsome; stylish; chic
 Clock watcher, a lazy worker
 Cook with gas, get somewhere
 Corker, a very good thing
 Crab, to spoil, as to "crab an act"
 Cuckoo, crazy
 D. D. T., drop dead twice
 Daddy, a backer; protector
 Dead beat, worthless fellow
 Dive, low eating house, dance hall
 Doggy, stylish
 Doll-up, to dress up
 Dope, facts; drugs; stupid person
 Double-cross, to betray
 Dough, money
 Down and out, end of one's resources
 Drag, influence
 Drop dead, expression of contempt
 Duck out, to escape
 Duds, clothes
 Dumb, stupid
 Easy, gullible; easily duped
 Easy mark, a dupe
 Eats, food; a meal
 Fade-out, to disappear

Fag, a cigarette
 Fall down on, to fail at
 Fall for, to be infatuated with
 Fanny, the buttocks
 Fiend, an enthusiast
 Fifty-fifty, equally divide
 Fire, to dismiss from a position
 Fizzle, a failure
 Flat tire, dull person
 Flophouse, a cheap lodging
 Frame (to), to fabricate evidence
 Frame-up, a trumped-up evidence
 Freeze out, to force out
 Fresh, impertinent
 Game, gamey; lame
 Get lost, go away
 Get one's goat, try one's patience
 Get one's hooks on, get hold of
 Get solid, to establish standing
 Get the gate, be discharged
 Get wise to, become aware of
 G. I., an enlisted man
 Gin mill, a saloon
 Giveaway, betrayal
 Go (to make a), to succeed
 Go-getter, energetic person
 Going some, doing very well
 Goon, a hired ruffian
 Go over big (to), to succeed
 Graft, illegal profit
 Grand, a thousand dollars
 Gravy, profit
 Grinders, teeth
 Grouch, a sour, peevish person
 Guff, nonsense
 Gumshoe, to proceed surreptitiously
 Guy, fellow, as, a regular guy
 Gyp, to cheat
 Hang (to get the), to understand
 Hard-boiled, callous
 Hash house, cheap eating place
 Hick, a country bumpkin
 High-brow, intellectual
 Highjacker, a bandit
 Hit the hay, go to bed
 Hobo, tramp
 Hock, to pawn; in hock, in pawn
 Hogwash, nonsense
 Hold on, wait a minute!
 Hooch, whisky; liquor
 Hooey, bunk; nonsense
 Hoof it, to walk
 Hoosegow, a jail
 Hophead, narcotics addict
 Horn in, to intrude
 Hot air, exaggerated statements
 Hot dog, exclamation of approval
 Hunch, presentiment
 Ice, diamonds
 I'll say, I agree
 In bad, under disfavor
 Inside dope, confidential
 Jabber, useless chatter
 Jack, money
 Jack up, to remind; to jog
 Jag, drunken spree
 Jailbirds, prisoners
 Jalopy, a broken-down automobile
 Jerk, a silly person
 Jinx, hoodoo
 John, a toilet
 Joint, dance hall, restaurant, etc.
 Josh, to tease; to banter
 Joy ride, a reckless ride
 Juke box, automatic record player
 Junk, poor in quality; narcotics
 Keep your shirt on, keep cool
 Kick, to complain
 Kid (v.), to tease

Knock, condemn or criticize
 Lemon, undesirable person or thing
 Let down, desert without warning
 Let up, to cease
 Lift, to steal
 Light out, to depart
 Lit, inebriated
 Live wire, energetic person
 Loaded, drunk
 Loon, a fool
 Low-brow, uncultured
 Low-down, important information
 Lulu, something superior
 Mae West, an inflatable life jacket
 Main squeeze, the chief
 Make (on the), intent on profit
 Make a getaway, escape
 Make the grade, accomplish the task
 Mixer, one who meets persons easily
 Moll, a gangster's girl friend
 Monkey business, foolish trifling
 Moocher, a beggar; cadger
 Moonshine, illicitly distilled whisky
 Muck, filth; worthless stuff
 Mum, silent
 N. G., no good
 Nab, to take
 Nail, to arrest
 Neck, to embrace
 Nerve, impudent cheek
 Nix, nothing
 Nothing doing, no chance whatever
 Not on your life, certainly not
 Not with it, badly mistaken
 Nut, idiot
 Nutty, crazy
 Old, epithet of endearment
 Old Harry, the devil
 Old Nick, the devil
 Old stuff, out of date
 Once-over, careful scrutiny
 On the bum, in a low state; spoiled
 On the spot, exposed to danger
 Pal, a friend; companion
 Pan out, to result
 Pass out, lose consciousness
 Pass up, to let slip
 Peepers, eyes
 Peeved, annoyed
 Pen, prison
 Pep, energy; vim
 Petting, amorous fondling
 Phiz (or phyzog), face
 Phoney, bogus; not genuine
 Pickled, intoxicated
 Picnic, an easy task
 Pie-eyed, intoxicated
 Piffled, half intoxicated
 Pinch, arrest
 Pins, legs
 Pipe, an easy task
 Pix, moving pictures; cinema
 Playboy, a free spender
 Played out, exhausted
 Poke, a bag or sack
 Poker face, expressionless
 Pug, a boxer
 Pull, influence
 Punch, vigor
 Punk, worthless; young hoodlum
 Pussyfoot, to proceed cautiously
 Put over, to accomplish
 Put over on, to impose on
 Put the skids under, get rid of
 Put-up job, a conspiracy
 Put wise, to acquaint with the facts
 Queer, to compromise; damage
 Quitter, a faintheart
 Razz, to heckle, to make fun of

Ready, ready money; cash
 Real McCoy, genuine article
 Regular fellow, "good" person
 Ritzy, stylish
 Road hog, an inconsiderate motorist
 Rod, revolver
 Root, to shout for
 Roughhouse, a disorderly affair
 Roughneck, rowdy
 Rough up, to treat harshly
 Rubberneck, a curious person
 Rube, a rustic
 Rub out, to kill
 Salve, flattery
 Sand, grit; courage
 Sap, a brainless person
 Scoff joint, restaurant
 Screw, crazy
 Scrounge, obtain illicitly
 Shake a leg, move on
 Shark, a sharper; trickster
 Shaver, a young boy
 Shoestring, with very little capital
 Shoot! Go ahead
 Showdown, an accounting
 Side-step, to evade
 Simp, simpleton
 Sinker, a doughnut
 Sit in with, join with
 Size up, to make a rapid estimate of
 Skin, cheat
 Slob, an untidy, careless person
 Slush, sentimentality
 Smacker, a dollar
 Small-time stuff, unimportant
 Smoke eater, a fireman
 Snafu, situation normal, all fouled up
 Snap, sinecure
 Snooty, supercilious; critical
 Snow, cocaine
 Sob sister, a woman reporter
 Sock, a severe blow
 Soft soap, flattery
 Souse, a habitual drinker
 Sparkler, diamond
 Sponge, live at another's cost
 Squeal, to betray an accomplice
 Steady, fiancé (both sexes)
 Steep, exorbitant
 Step on it, hurry up
 Step out, go out on pleasure
 Strike oil, to make money
 Strong-arm, violent
 Stuck on, infatuated by
 Stung, taken in; cheated
 Stunt, trick, usually acrobatic
 Swat, to hit; also a blow
 Swear off, to stop drinking
 Take a powder, go away
 Take for a ride, to kill
 Take the rap, accept the punishment
 Talk turkey, to speak frankly
 Tear, a wild spree
 Tickle the ivories, play the piano
 Tip, a hint
 Tip off, to inform
 Toney, aristocratic
 Tummy, stomach
 Up and coming, promising
 Vip, very important person
 Walkover, an easy task
 Wangle, obtain by cunning
 Whiz, a wonder
 Willies (the), an attack of "nerves"
 Wisecrack, smart remark
 Wow, a great success
 Yellow, cowardly
 Yellow streak, a vein of cowardice
 Yen, a yearning



*Common sense in an uncommon degree is what the world
calls wisdom.*
—COLERIDGE

COMMON SENSE

The general intelligence of the ordinary person

from the Wisdom of Encyclopædia Britannica

COMMON SENSE nowadays usually signifies the intelligence of normal people as distinguished from the views more or less peculiar to those who belong to special schools of thought. The contrast intended is sometimes that between the views of average people as against the views of peculiar or exceptional people, and sometimes that between the attitude of those who have just a general education and the attitude or outlook of those who have specialized in some way or other.

The term was first introduced by Aristotle, who seems to have been prompted by a variety of considerations. The five senses of popular psychology are each of them a special sense—visual only, or auditory only, or tactual only, and so on. As the organs for each of them are distinct and separate it seems remarkable that the visible, auditory, tactual and other sense qualities of an object should be localized in one and the same object. Hence the postulation of a “common” sense in addition to the “special” senses in order to account for the synthesis in question. Again, there are some things apprehended in sense perception which are not peculiar to any one of the special senses but are common to two or more of them—such are, for instance, motion, rest, number, size, shape.

It seemed, therefore, reasonable to Aristotle to assume a common sense for the apprehension of such “common sensibles” as they were called. Once more, the different special sense-impressions are frequently compared and commonly differentiated. This likewise seemed to be the function of a common sense capable of comparing the reports of the several special senses.

It is not quite certain whether Aristotle regarded the special senses as special functions of the common sense which included them all and more, or whether he regarded common sense as something separate from each of them but co-operating with them. In any case, he was led by the aforementioned and other considerations to formulate the existence of a common sense which he also credited with the function of memory, imagination and even of awareness of the fact that we are having sense-experiences. It is this last function, probably, that prompted some later writers to substitute an “inner” sense for Aristotle’s “common” sense. Having regard to the kind of functions which Aristotle attributed to “common sense” it is not strange that the term should eventually have come to acquire the meaning of something like the general intelligence of the ordinary person. ♦

THE PSYCHOLOGY OF THINKING



from the Wisdom of Encyclopædia Britannica

Thinking is the talking of the soul with itself.

—PLATO

THE first sustained and systematic psychological experiments on thinking were reported during the first decade of the 20th century. In the psychology then prevalent, still new as an experimental science, thinking was conceived as essentially a conscious process, directly open to the introspection of the thinker. The experimental method, therefore, was that of presenting brief, thought-provoking tasks to individuals who served as subjects, and of securing their introspections promptly as each task was completed.

The results of this straightforward and apparently obvious procedure were such as to cast doubt on some of the basic presuppositions of the science of psychology as it was then widely understood. Among the most thoroughgoing of the early experimental psychologists, it was commonly assumed that consciousness is a composition of elementary processes—specifically, simple sensations, images and feelings—and that it is the special task of a scientific psychology to describe consciousness exhaustively in terms of these constituents, as determined by experimentally controlled introspection.

It was precisely this assumption concerning the nature of consciousness that the data from the thought experiments called into question. The subjects' reports, to be sure, mentioned sensory, affective and imaginal contents; but they referred far more prominently to conscious events which most subjects described as unanalyzable into the expected elementary constituents. Among these were conscious attitudes like doubt, hesitation or sudden illumination, and "thoughts," noted simply as thoughts *of* or thoughts *about*, reported as having little or no sensory or imaginal content. Furthermore, such

contentless or relatively contentless occurrences, seemed to the subjects to mark critical turning points in their thinking, crucial stages in the solution of a problem.

These results were especially impressive because they emerged almost simultaneously from three independent sets of investigations, conducted respectively by A. Binet in France, R. S. Woodworth in the United States and O. Külpe and his co-workers in Austria. Naturally they aroused skepticism, controversy and further research. An obvious criticism, and one emphatically stated, was that the reported results might have been based on faulty introspection. But many psychologists hesitated to reject on these grounds alone an agreement on unexpected findings, independently obtained and reported by investigators of recognized competence.

But clearly the question of introspection required critical examination. Indeed, one of the most significant features of these first experiments on thinking is that if the reported introspective data are accepted as valid, they themselves point to limitations and flaws in introspection as a method of studying thinking. The occurrence of contentless or relatively contentless stretches of thought called attention to the possibility that important determinants of thought—neutral "sets," perhaps, or other bodily processes—are, as a simple matter of fact, not registered in consciousness and are, therefore, outside the range of introspective observation. Besides, the reported course of conscious events themselves did not match step by step what the organism was actually doing. The evidence indicated, for example, that maximal awareness of an assigned task sometimes occurred only after the task had been performed; that the task had been initiated and correctly executed with little or no conscious awareness of its nature. In short, the indications were that the course of thought is neither completely nor faithfully mirrored in consciousness. There was evidence, too, that introspective observation is unreliable. Even among highly trained introspectionists, disagreements arose, not only concerning the interpretation of introspective data, but concerning the nature of some of the data themselves; and disagreements that could not be settled by an appeal to observed facts—here introspectively observed facts—strongly suggested that introspection is incapable of giving results sufficiently free from vagueness and ambiguity to be acceptable in scientific research. To some psychologists, it seemed necessary to discard introspection altogether, not only in studying thinking, but in all psychological research. But to others, perhaps to most, the situation meant that the possibilities of introspection had been greatly overestimated; that like other modes of observation, it has limitations which must be recognized; but that within these limits, it may be useful if properly safeguarded, especially when combined with other methods. In any event the increased wariness toward introspection created a readiness to try other approaches to the problem, and hence to entertain conceptions of thinking which would direct research into new channels.

One such conception was that suggested by the Darwinian theory. In the light of *The Origin of Species* and *The Descent of Man*, human thinking is readily interpretable as one of the modes of adaptation evolved by a particular animal species, something to be explained along with other modes of adaptation in living organisms, in terms of its ancestry, its environmental determinants and its biological utility. The problem of thinking was thus shifted from "What is thinking? Of what stuff is it made?" to "What does it *do*? How does it operate? How is it related to other activities of the organism?"

The Darwinian theory also suggested a new methodological approach. Emphasizing as it did the importance of interspecies comparisons, it led to methods of research applicable to subhuman animals as well as to human beings. In general, the method was that of investigating the behavior of animals for indications of specified

abilities, for example, the ability to perceive relations. C. Lloyd Morgan's interest in the relation between human and animal intelligence led him to perform informal but cautiously interpreted experiments of this sort, and his methods were developed by E. L. Thorndike into laboratory experiments in which special apparatus, such as mazes and puzzle boxes, made it possible to secure not only qualitative descriptions but also quantitative measures of the animal's behavior under known conditions. For example, Thorndike constructed learning curves which represented in terms of times required for successive escapes from a given maze or puzzle box an animal's increasing proficiency in mastering it. On the basis of his findings, he reported that his animals—cats, dogs, chicks and monkeys—acquired correct modes of reaction through a kind of behavior subsequently called trial and error; that they produced a succession of reactions, approximately at random, to one after another feature or aspect of the external situation and that in the course of this activity, reactions leading to failure were gradually weakened and “stamped out,” those leading to success, strengthened and “stamped in.” In short, he explained an animal's successful performance as the outcome, not of intelligence or thought, but of associations produced by the interplay of bodily mechanisms, aroused in the course of its initially random reactions to the environment.

Thorndike's methods were extended by H. A. Ruger to inquiries into the psychology of solving complex problems. Using human subjects, most of whom were intelligent and educated adults, and substituting complicated mechanical puzzles for Thorndike's mazes and puzzle boxes, he followed essentially the same procedures as those used by Thorndike, supplementing them, however, with introspective reports from his subjects. In presenting his findings, Ruger emphasized the large amount of typically “animal” trial and error in the activities of his subjects, not only in their acquisition of the motor skills required for manipulating the puzzles, but also in their understanding of the presented situations. He noted that many kinds of nonrational behavior regularly occurred; *e.g.*, that unsuccessful reactions were often retained after they had proved to be useless; that successful variations in procedure often made their first appearance, not through foresight, but without even attracting the subject's notice; that a puzzle was often solved—*i.e.*, repeatedly manipulated with consistent correctness—with little or no comprehension of the principles involved. Ruger noted especially that the course of events by which a puzzle was eventually understood, was similar to that by which a motor skill is acquired; that ordinarily the understanding of a puzzle did not occur in a single flash of comprehension, but was achieved gradually through a succession of partial analyses; that the extent to which it was comprehended was itself a matter of degree; that often the situation was analyzed up to a given point and no further. But Ruger also presented data which in his opinion pointed to distinctively human as contrasted with animal procedures. Among the learning curves of his human subjects were some that showed sudden drops in performance time, and these drops, indicating marked and consistently maintained improvement, coincided in most cases with introspective reports that just here the subject had seen the point of the puzzle (insofar as he understood it)—sometimes that it had flashed upon him suddenly, sometimes that he had worked it out deliberately. But even these reactions which seemed to him distinctively human, appeared in a context of typically animal trial and error, in fact seemed to grow out of it and to be conditioned by it. His results suggested that the continuity between human and animal behavior was indicated less by the presence of typically human intelligence in animals, than by the large amount of typically animal trial and error that characterized human thinking.

Both in methods and results, Ruger's study is representative of

many experiments which extended research on thinking beyond the limits set by the problem as formulated in the first psychological laboratories. A further revision in method and a more drastic restatement of the problem were made by American behaviorism, a school of psychology that discarded all reference to consciousness in its account of thinking as of all psychological processes. In the early and relatively uncritical behaviorism of J. B. Watson, the chief contribution to the psychology of thinking was that of stating the problem in a thoroughly objective, though oversimplified and highly schematic form. As a part of his program of accounting for all behavior in terms of bodily mechanisms, Watson treated thinking as essentially laryngeal behavior, consisting of implicit or subvocal speech as contrasted with overt verbal reactions. To the question: “Is thinking merely a matter of language mechanisms?” his answer was “Yes,” but he included among language mechanisms not merely verbal reactions, but equivalent reactions like the shrug of a shoulder or a visceral quiver. His basic claim was that thought is wholly explicable as bodily reactions substitutable for, and in that sense symbolic of, those by which the organism engages directly with actual objects, events and situations.

Relatively few actual experiments on thinking were contributed by the early Watsonian behaviorists, and most of these did not greatly differ in method from those illustrated by Ruger's study. The discarding of introspection was often more apparent than real, since verbal report was accepted as a form of overt behavior, and the distinction between language as reaction and language as report was usually left obscure. The results, too, were similar to those previously reported. The experimenters usually called attention to the frequency of nonrational reactions, and they tended also to emphasize the similarities between behavior presumably involving thought, and motor trial and error where bodily reactions are more conspicuous. Later and more sophisticated forms of behaviorism clarified the methodological problem by pointing out that those determinants of behavior ordinarily classified as thinking, though not open to observation, may be *inferred* from behavior under suitably arranged experimental conditions. For example, the experimenter may arrange a situation which the subject can solve if and only if he reacts to a specified relation, and on the assumption that the conditions have been suitably arranged and adequately controlled, the experimenter may infer that the relation has been reacted to, if the subject produces the solution. In this way a behaviorist may study thinking experimentally, without resort to introspection.

The psychology of thinking has also been approached, notably by the Gestalt psychologists, through studies of perception. It is a basic contention of Gestalt psychology that the immediate data of experience are not merely sensed but perceived; that, to take visual experience as an illustration, anyone looking about him in a naïve, uncritical way is immediately aware not merely of sensory contents such as green and blue in various shades and intensities, but of organized wholes or “gestalten,” such as green trees and an expanse of blue lake with a definite shore line. The gestaltists further insist that such organized wholes are immediately experienced as perceptually organized; that their organization is the outcome, not of intellectual elaboration, but of the interaction of forces within the perceptual field itself, including the physiological processes involved in perceiving. Taking perception as their clue, they explain thinking as a mode of activity that tends toward organized wholes similar in organization to perceptual gestalten, a mode of activity characterized during its course by successive organizations and reorganizations of the field in which it operates, until it is stabilized in the closed, definitely articulated structure that constitutes the solution of the problem.

Specifically, Gestalt psychologists emphasize the role of *insight*

in thinking. This term covers a wide variety of cases; and though its precise meaning is not always readily apparent, it seems clear that it refers to the grasping of a relational pattern in a manner akin to the perceptual apprehension of an organized and unitary whole. This concept of insight first aroused widespread interest when W. Koehler published his famous study on the mentality of anthropoid apes. Criticizing Thorndike's procedures as placing animals in situations that artificially reduced them to trial and error, Koehler conducted his experiments in surroundings familiar to the animals and resembling their natural habitat, and confronted them with problems which depended for solution on the animal's reaction to a relational pattern. Though he reported considerable behavior classifiable as trial and error, Koehler stressed the point that the critical moment in the animal's solution of a problem was that in which he grasped the appropriate relational pattern—when, for example, he saw a box, upon which he could climb, as a means of making a workable connection between himself and the fruit suspended beyond his farthest reach. Koehler's most famous single case of animal insight is that of an ape who, confined in a cage, in the presence of visible food at some distance outside the cage, and provided with bamboo sticks too short to reach the food, eventually, after signs of considerable difficulty and frustration, inserted one stick into another, thus fashioning a tool which brought into a single relational system, the desired food, the hungry animal and a means of closing the gap between them. The concept of insight has also been applied to some of the highest reaches of human intellectual achievement. Max Wertheimer used it in giving an account of so exceptional a course of thought as that which led Albert Einstein to his theory of relativity. The account was based on a series of leisurely conversations, during which Einstein described, in response to Wertheimer's questions, the course and manner of his thinking. According to Wertheimer, the successive stages reported by Einstein—among them, his first glimmerings of the problem, his preoccupation with the Maxwell equations, his lack of surprise at the results of the Michelson experiment, his incomplete satisfaction with the Lorentz transformations—were successive configurations and reconfigurations which, being partial insights, did not give a closed relational pattern, until he conceived of treating the velocity of light as an invariant, thus achieving an insight which, when elaborated, transformed classical physics and brought all the terms of the problem into a single system.

Working in a context very different from that of Gestalt psychology, Charles Spearman also based his account of thinking on reaction to relations. He found the paradigm of all cognition in the eduction from a given relational situation of something not immediately given in that situation; either the eduction of a relation (say, similarity) from two similar terms or fundamentals; or the eduction of a correlate (say, a similar term) from a presented term and a presented relation, here similarity. He explained all levels of intellectual activity in terms of this basic schema. To support his interpretation, he made extensive use of tests of intelligence. He believed that the mathematical analysis of the results of various kinds and combinations of tests gave evidence of a mode of organization among intellectual abilities that required his theory as an explanation.

Attempts have been made, too, to understand thinking by considering it in relation to other psychological processes, especially those representing the basic needs, desires and urges of the organism. The strongest single influence in making this problem focal was that exerted by Sigmund Freud. According to Freud, the function of thinking, and indeed of all cognitive processes, is to procure satisfactions for the primal organic needs, especially those represented by sexual desires which repression has rendered unconscious. In his early teachings, he strongly emphasized the point that all human

motives spring from these primitive desires, and that by comparison, the intellectual processes not only play a minor and subsidiary role in human life, but are so weak as to be subject, under the influence of their powerful masters, to perversions like rationalization, fantasy and other forms of wishful thinking. In his later writings, he considered the cognitive processes more directly. Here he treated perception as a device which the organism develops to gain a true representation of external reality, the source of all the means of real, not merely fantasied, satisfactions; and in this connection he treated thinking as a set of elaborative operations between perception and action, occasioned by inevitable difficulties and delays in obtaining such satisfactions. As means of coping with real situations, including the desires themselves, the cognitive processes were accorded a more important role than that formerly assigned them; but Freud still regarded them as secondary in function and power to the instinctual drives. William McDougall's treatment of the intellectual processes somewhat resembles Freud's. He too regarded the instincts as the springs of all action, including intellectual action; but in admitting, as determinants of behavior, sentiments like loyalty and self-esteem, he, too, recognized motivational structures in which instincts had undergone intellectual modification.

The wider context of thinking includes, not only its psychological setting, but its bodily determinants, its genetic and phylogenetic history, and the social field in which it operates. Concerning the bodily structures and functions that condition thinking, the evidence is too controversial to be considered here. The status of the phylogenetic problem has already been briefly indicated; it is indeed one of the oddities of the psychology of thinking that at least as much scientific knowledge is available about the thinking of animals as about that of human beings. The genetic approach to the problem of thinking has been vigorously exploited. The extensive work of Jean Piaget may be cited as a single illustration. By systematically and expertly questioning children of different ages, Piaget and his co-workers undertook to chart the course of human intellectual development, tracing through the successive stages of childhood, characteristic changes in children's conceptions of the physical world, and also of their social world, as reflected in such conceptions as those of justice and guilt. Thinking has also been studied in its social and cultural setting. The social sciences, especially cultural anthropology, have insistently maintained that thinking is so strongly conditioned by cultural factors that very different ways of thinking develop in different cultural milieus. B. Malinowski has shown, again to take a single illustration, that a language is largely determined by the ways of life of a given culture, and it has become increasingly evident through logical, psychological and sociological investigations, that a person's language is a powerful determinant of the way in which he apprehends his physical and social environment, and hence of many of the deeply rooted, unconscious assumptions on which his thinking operates.

It is evident from the foregoing discussion that thinking remains one of the unsolved problems of psychology. There is, to be sure, a considerable mass of factual knowledge relevant to the problem, but this fact itself suggests that the immediate need in the psychology of thinking may be for some guiding conception of thinking, some theoretical formulation concerning its nature, which will order the available factual data and at the same time co-ordinate research. The many researches on thinking have been pursued from many different theoretical standpoints, and the various lines of investigation, though some show signs of converging, have not yet met in an explanation which accounts for all the available relevant facts in a manner acceptable to all those who are competent to judge. The psychology of thinking, then, must be presented, not as a record of achievement, but as a report of progress, or at least of persistent endeavor. ♦

IMMORTAL PHILOSOPHERS ON IMMORTALITY

from the Wisdom of Encyclopædia Britannica

*All men's souls are immortal, but the souls of the righteous are both
immortal and divine.*

—SOCRATES

The School of Philosophers. Painting by Raphael.



THE term "immortal" has been used in a wide general sense for everlasting, as in such statements that the writings of Plato, the plays of Shakespeare, the music of Mozart, are immortal. But in its chief use the term "immortality" has had reference to a continuity of men's spiritual existence after the death of their bodies. This article is limited to that conception.

The earlier anthropologists, as E. B. Tylor and Sir James Frazer, assembled convincing evidence that the belief in a future life was widespread in the regions of primitive culture. Among most peoples the belief has continued through the centuries. But the nature of future existence has been conceived in very different ways. As Tylor showed, in the earliest known times there was little, often no, ethical relation between conduct on earth and the life beyond. M. Jastrow wrote of "the almost complete absence of all ethical considerations in connection with the dead" in ancient Babylonia and Assyria. Motoöri, an 18th century Japanese thinker, said that "Hades is a land beneath the earth, whither, when they die, all men go, mean and noble, virtuous and wicked, without distinction." In some regions it came to be declared that warriors who died in battle went to a place of happiness. Later, there was a general development of the ethical idea that the afterlife would be one of rewards and punishments for conduct on earth. So in ancient Egypt at death the individual was represented as coming before judges as to that conduct. The Persian followers of Zarathustra accepted the notion of Chinvat, a bridge to be crossed after death, broad for the righteous, narrow for the wicked who fell from it into hell. In India, the steps upward—or downward—in the series of future incarnated lives have been (and still are) regarded as consequences of conduct and attitudes in the actual present life. The idea of future rewards and punishments dominated many Christians in the middle ages, and is held today by many Christians of all denominations. In contrast many contemporary secular thinkers maintain that the morally good is to be sought for itself, and evil shunned on its own account, irrespective of any belief in a future life.

That the belief in immortality has been widespread through history is no proof of its truth. It may be a superstition that arose from dreams or other natural experiences. Thus, the question of its validity has been raised philosophically from the earliest times that men came to intelligent reflection. In the Hindu *Katha-Upanishad*, Naciketas says: "This doubt there is about a man departed—some say: He is; some: He does not exist. Of this would I know." The *Upanishads*, the basis of most philosophy in India, are predominantly a discussion of the nature of man and his ultimate destiny. Immortality was one of the chief problems of Plato's thought. With the contention that reality, as such, is fundamentally spiritual, he tried to prove immortality, maintaining that nothing could destroy the soul. Aristotle conceived reason as eternal, but did not defend personal immortality as he thought the soul could not exist disembodied. The Epicureans, from a materialistic standpoint, held that there is no consciousness after death, and thus it is not to be feared. The Stoics mostly considered that it is the rational universe as a whole that persists. Individual men, as Marcus Aurelius wrote, simply have their allotted periods in the drama of existence. However, Cicero finally accepted personal immortality. Augustine, following Neo-Platonism, regarded men's souls as being in essence eternal. The Moslem philosopher Avicenna declared the soul immortal, but his coreligionist, Averroes, keeping closer to Aristotle, accepted the eternity only of universal reason. Albertus Magnus defended immortality on the ground that the soul, in itself a cause, is an independent reality. John Duns Scotus contended that personal immortality cannot be proved or disproved by reason. Spinoza, taking God as ultimate reality as a whole maintained His eternity, but not the immortality of individual persons within Him. Leibniz contended that reality is constituted of spiritual monads.

Men, as finite monads, not capable of origination by composition, are created by God. He could also annihilate them. However, in that He has planted in men a striving for spiritual perfection there may be faith that He will ensure their continued existence giving them the possibility to achieve it. Kant, admitting that the soul cannot cease by disintegration, suggested that it might end by the loss of its own power. Immortality cannot be demonstrated by pure reason, but it may be believed as a postulate of morality. Holiness, "the perfect accordance of the will with the moral law," demands endless progress "only possible on the supposition of an endless duration of the existence and personality of the same rational being (which is called the immortality of the soul)." Joseph Butler, insisting that probability is the guide to life, urged, on ethical grounds similar to those of Kant, that immortality should be accepted as probable. Hegel's philosophy has been interpreted by one wing of his followers as pointing to a cessation of finite individualities in the absolute, and by another to their persistence as constituents of the absolute. A. Schopenhauer conceived ultimate redemption from the misery of life as a lapse from conscious personality into the unconscious universal will. The foregoing illustrates the chief positions held in philosophical treatments. After 1925 there was little philosophical discussion of the problem. There was a widespread impression that no conclusions could be reached concerning it and its consideration might be avoided. William Ernest Hocking challenged this contemporary attitude as an "idleness of mind."

Any form of spiritual continuity has been rejected by some thinkers on the basis of an assumption that all is physical. Few philosophers in the occident or the orient have adopted a definite materialism. It was most widespread at mid-20th century among the adherents to Marxian communism. They find in it a ground for rejection of the belief in immortality, taken to be promulgated by priests and others to exploit the masses of the world. Some contemporary thinkers, discarding the term materialism for naturalism, treated man as part of nature. Though their position was metaphysically indefinite, they endeavored to describe human psychical life without the admission of a spiritual soul or a spiritual deity. Gilbert Ryle describes the soul as a ghost. Corliss Lamont considers immortality an illusion, probably a delusion. The fundamental difficulty that should be regarded as definitely ruling out materialism and all forms of contemporary naturalism is that it is impossible to describe the difference between truths and errors in terms of physical processes. In dismissing the soul as a ghost, Ryle gives no satisfactory account of himself as the thinker of his own theories. Lamont similarly ignores the being who distinguishes between realities and illusions. The contention that we do not know *how* a spiritual mind and a material body may interact is met by the reply that we do not know *how* one material body may affect another. The ultimate problem in both is that of change. Changes have to be accepted; they cannot be explained in terms of the changeless. From the standpoints of science and philosophy the position in the 1950s was not fundamentally different from what it was for William James in 1905: that the relations of mind and body may be described in terms of the interactions of a spiritual being and a physical organism. But even if the soul is different from the body, they are so intimately related that it is extremely difficult to conceive of the continuance of a bodyless soul. This difficulty has been in part met, especially in the orient by the doctrine of reincarnation, and in the occident among Christians with the belief that the soul will have a spiritual body.

In contrast with materialism and naturalism is the theory that reality is ultimately one universal spirit and individual human beings only transitory manifestations of it. Though the one spirit is called eternal, human beings are not to expect personal immortality. The fundamental difficulty of this theory is that both truths and errors

are manifestations of the one spirit, who alone is their ultimate thinker. The spirit, the absolute, is in a condition of self-contradiction. The conflicts of good and evil are within it. There is no escape from the difficulty by calling the contradictions and conflicts mere appearances, for the appearances must be in the absolute as they appear.

Discussions of immortality have frequently been obscured by the contention that what men seek is the "eternal." Rudolph Eucken spoke of immortality as experiencing the eternal "in the midst of time." William Ralph Inge interpreted it as a participation in eternal values, and seemed to have a contempt for the idea of a future life for individual minds. The two conceptions of eternity, (1) that it is a now inclusive of all the past, the present and the future; and (2) that it is something in itself timeless or transcending time, are products of abstract reflection. It cannot be said that men have any experience of either. For those other than the few philosophers and theologians who use these conceptions, immortality normally means temporal personal continuity. But within the now of this life and the future of a next one, the religious mind may have an enduring communion with an ever-living God that may give a satisfaction greater than that in values that may not persist.

It has frequently been argued that there is a universal desire for personal immortality—as though instinctive, involving its eventual satisfaction. But Sir William Osler, with wide experience of persons near to death, declared that one minority of them ardently desired a future life, another minority hoped for final extinction, and the majority appeared indifferent. The scientist Ilya Metchnikov, after a critical examination of the philosophical and religious arguments for immortality, argued that the discontent of men is due to their failure to obtain complete satisfaction of their natural impulses. If they could live to a ripe old age and attain that satisfaction they would accept death as the natural end of life. Such longevity and satisfaction may eventually be achieved by science, and then all desire for immortality would cease. But, as Shakespeare suggested in Hamlet's soliloquy, there may be a future life whether we desire it or not.

It is seriously doubted whether scientific methods can make human life as satisfactory as I. Metchnikov imagined. According to some scientists changing conditions may lead to the degradation and eventual cessation of terrestrial human life. Most followers of

naturalism, like Metchnikov, do not take adequately into account the character of men's ethical aspirations. Some theists would maintain that nature is not intended to give men complete satisfaction. The ethical argument has always been recognized as one of the strongest in justification of belief in personal immortality. It is frustrating that mankind, having developed so far intellectually, aesthetically, morally and religiously, should end entirely with death. Cicero expressed such a conviction in his *Tusculan Disputations*: "For we are not born or created idly or fortuitously; but doubtless there is some power which takes thought for the race of men, and which was not likely to create and foster what—when it had accomplished all its toils—would sink into everlasting misery in death." So Hastings Rashdall wrote in 1907: "Only if we suppose that the present life of human beings has an end which lies in part beyond the limits of the present natural order, in so far as that order is accessible to present human observation, can we find a rational meaning and explanation for human life as we know it; and by far the most natural and intelligible form of such a world-end is the belief in Immortality for the individual souls who have lived there."

The profoundly religious have a faith in immortality which is a firm conviction affecting their outlook on life. Though, in the use of the term *hope*, there may be at times the suggestion of a possible doubt, the faith is more than the acceptance of an intellectual hypothesis. It is a fact of history that the idea of immortality has been sustained within the religions. The one firm basis for the belief has been, and is, in religious experience, in the soul's immediate communion with God. He must know whether men are immortal, and may bring a conviction of it to individuals, *when they are truly ready to receive it*. If God creates selves at the beginning of their terrestrial lives, He may sustain in future lives either (1) all—universal immortality; or (2) only those who merit continuance—conditional immortality.

Some modern humanists contend that belief in immortality takes attention from and reduces efforts for the goods of the present life. It did that in some periods in the past, and may still do so for a few individuals. Religious teachers now insist that God has put mankind into this life and the best is to be done for the fulfilment of its duties and the enjoyment of its possibilities. Faith in immortality has given men a wider vision. Some of the greatest sacrifices for mankind have been made by men with that faith. ♦





FAITH

reaching beyond the already known

from the Wisdom of Encyclopædia Britannica

FAITH is an attitude of mind which, though not confined to religious experience, can best be examined by setting out from its manifestations within that sphere of experience. There we find in clearest form illustrations of the several shades of meaning which the word "faith" has borne. A classic definition is that presented in the Bible: "faith is the substance of things hoped for, the evidence of things not seen." The word for "evidence" is, in the Revised version, rendered as "proving," and for "substance" are offered the alternative translations "assurance" and "the giving substance to." Assurance, certitude or convincedness, and giving substance to what we do not perceive and as to which we, therefore, only entertain an idea or a supposition, may at first seem somewhat disparate meanings for one word; but the connection between them is revealed by a common signification of the word "realize." We speak of realizing what some event is when we discern its import, and when what was, so to say, "nothing to us" is found to be something with which we have to reckon or which can influence our thought and action. Personal certitude or conviction as to what as yet is not matter of scientific knowledge or proven with logical certainty, is of the essence of faith; and action upon it *may* lead on to discovery of the actuality of the object, *i.e.*, to substantiation of the hoped-for or the unseen.

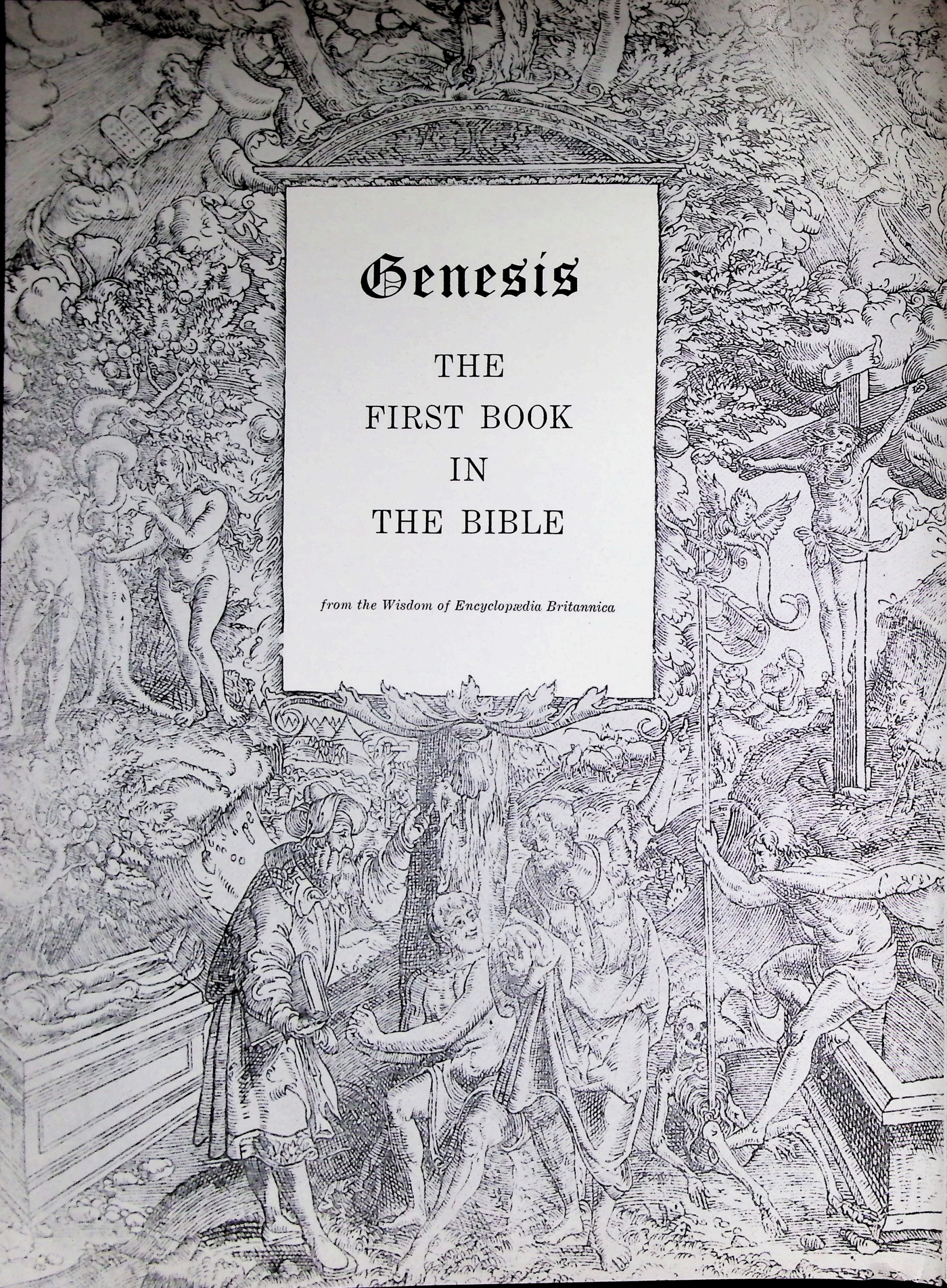
In the case of faith in God, whom "no man hath seen at any time," such certitude cannot issue in sight or sensibly verified knowledge; though it may develop into "proving" in the sense of establishing reasoned and reasonable belief, such as fact and

experience corroborate. But in other spheres faith often issues in knowledge, such as can be characterized as seeing or perceiving what, without such exercise of faith, would have remained unseen or unknown. Thus the faith of Columbus "realized" America for the European; and an idea of Stephenson's led to the actual locomotive engine. In neither case did faith create the reality, but in both it substantiated the unseen, and brought men into actual touch with what had been but conceived or supposed. Thus faith begins in creating or fashioning an idea; and it may issue in finding a real counterpart to the idea. There is, however, no necessity that it shall so issue; and frequently it does not.

The long list of instances of the faithful given in the Bible is made up of prophets, kings, etc., who achieved the heroic life and victories of various kinds, in virtue of their souls being possessed by faith; their faith was verified by their lives. They are all concrete embodiments of the principle "nothing venture, nothing have." And that principle is not only the essence of religious faith; it underlies the acquisition of all human knowledge, such as, for the conduct of life, is most worth having. Thus the "father of the faithful" who obeyed his inward summons and went forward "not knowing whither" is an allegory of the intellectual progress of mankind. Man did not begin with scientific knowledge or knowing, but with learning through doing. He learned by failure as well as by success, and in either case he ventured before he came to have.

Besides the primary meaning that has been set forth "faith" has borne others. Sometimes the word has been used as a synonym for "belief" or intellectual assent. But whereas belief is more or less constrained by fact already known, and which convinces us independently of any striving on our part, "faith" is generally used to emphasize the active or volitional element of experience, involved in venture reaching beyond the already known. Faith, again, is to be distinguished from credulity, with which it is apt to be confounded. The open mind and docility, personified in the New Testament as "the little child" are requisite for reception of truth; but there is no beatitude on credulousness. If faith, or the working to a lead or suggestion that experience suggests but does not warrant, is to issue in reasonable belief, credulity must be restrained by resort to the method of doubt, which is equally essential for acquisition of knowledge. And faith proper is doubt-sifted credulity. It proves all things before holding fast to them as true, and pursues no apparently open road after it has been shown to be closed; whereas credulity is interested belief, such as is often resorted to in order to escape the discomfort of uncertainty. Faith or belief worth calling belief must often "be purchased with the sweat of the brow." Another meaning of "faith" current in theological literature as well as in common speech, is that of trust. This resembles faith, as above described, and differs from belief in involving will and feeling: but it is rather an attitude issuing out of, and presupposing, the faith which creates its idea and then establishes belief in its actuality.

Before we can trust in God, we must believe that He is; and that belief is acquired by a venture of faith. Lastly, it is unnecessary to narrow down faith to *moral* postulation, or to the attitude of valuation, exclusively. Religious faith was forthcoming before advanced morality appeared; moreover, it is not concerned with what ought to be real or realized, but with what *is* realizable. Theology founded on faith is dogma concerning ultimate reality, not pictorial recipes for pious conduct. When religious faith is conceived as but a particular case of the faith that is involved in all knowledge and reason, science and faith can be seen to be complementary, not mutually exclusive; they can lodge, without need of reconciliation, in brotherly relation within one mind, provided the mind is content with reasonableness, where logical rationality is unattainable. ♦



Genesis

THE FIRST BOOK IN THE BIBLE

from the Wisdom of Encyclopædia Britannica

GENESIS, the name of the first book in the Bible, derives its title from the Septuagint rendering of ch. ii, 4. It is the first of the five books (the Pentateuch), or, with the inclusion of Joshua, of the six (the Hexateuch), which cover the history of the Hebrews to their occupation of Canaan. The "genesis" or "becoming" (*i.e.*, coming into being) of history begins with records of antediluvian times: the creation of the world, of the first pair of human beings, and the origin of sin, the civilization and moral degeneration of mankind, the history of man to the time of Noah, the flood, the confusion of languages and the divisions of the human race. Turning next to the descendants of Shem, the book deals with Abraham, Isaac and Jacob, the "fathers" of the tribes of Israel, and concludes with the personal history of Joseph, and the descent of his father Jacob (or Israel) and his brethren into the land of Egypt. The book of Genesis, as a whole, is closely connected with the subsequent oppression of the sons of Israel, the revelation of Yahweh the God of their fathers, the "exodus" of the Israelites to the land promised to their fathers and its conquest.

Only on the assumption that the book of Genesis is a composite work is it possible to explain the duplication of events, the varying use of the divine names *Yahweh* and *Elohim*, the linguistic and stylistic differences, the internal intricacies of the subject matter, and the differing standpoints as regards tradition, chronology, morals and religion. The cumulative effect of the whole evidence is too strong to be withstood, and already in the 17th century it was recognized that the book was of composite origin.

Immense labor has been spent upon the critical analysis of the contents, but it is only since the work of Karl Graf (1866) and Julius Wellhausen (1878) that a literary hypothesis has been found which explains the most obvious intricacies. The Graf-Wellhausen literary theory has gained the assent of almost all trained and unbiased biblical scholars; it has not been shaken by the more recent light from external evidence, and no alternative theory has as yet been produced. According to this, Genesis is a postexilic work composed of a postexilic priestly source (P) and nonpriestly earlier sources which differ markedly from P in language, style and religious standpoint, but much less markedly from one and another. These sources can be traced elsewhere in the Pentateuch and Joshua, and P itself is related to the postexilic works Chronicles, Ezra and Nehemiah. In its present form Genesis is an indispensable portion of the biblical history, and consequently its literary growth can not be viewed apart from that of the books which follow. On internal grounds it appears that the Pentateuch and Joshua, as they now read, virtually come in between an older history by "Deuteronomic" compilers (easily recognizable in Judges and Kings), and the later treatment of the monarchy in Chronicles, where the influence of the circle which produced P and the present Mosaic legislation is quite discernible. There have been stages where earlier extant sources have been cut down, adjusted or revised by compilers who have incorporated fresh material, and it is the later compilers of Genesis who have made the book a fairly knit whole. The technical investigation of the literary problems (especially the extent of the earlier sources) is a work of great complexity, and, for ordinary purposes, it is more important to obtain a preliminary appreciation of the general features of the contents of Genesis.

That the records of the prehistoric ages in Genesis i-xi are at complete variance with modern science and archaeological research is unquestionable. But although it is impossible to regard them any longer either as genuine history or as subjects for an allegorical interpretation (which would prove the accuracy of any record) they are of distinct value as human documents. They reflect the ideas and thoughts of the Hebrews, they illustrate their conceptions of God and the universe, and they furnish material for a comparison of the moral development of the Hebrews with that of other early

racess. Some of the traditions are closely akin to those current in ancient Babylonia, but a careful and impartial comparison at once illustrates in a striking manner the relative moral and spiritual superiority of our writers.

The records of the patriarchal age, xii-1, are very variously estimated, although the great majority of scholars agree that they are not contemporary and that they can not be used as they stand, for pre-Mosaic times. Apart from the ordinary arguments of historical criticism, it is to be noticed that external evidence does not support the assumption that the records preserve genuine pre-Mosaic history. There are no grounds for any arbitrary distinction between the "prehistoric" pre-Abrahamic age and the later age. External evidence, which recognizes no universal deluge and no dispersal of mankind in the third millennium B.C., throws its own light upon the opening centuries of the second. It has revealed conditions which are not reflected in Genesis, and important facts upon which the book is silent—unless, indeed, in Genesis xiv, there is a passing allusion to the great Babylonian monarch Khammurabi in the name Amraphel. A perusal of modern attempts to recover historical facts or historical outline from the book will show how very inadequate the material proves to be, and the reconstructions will be found to depend upon an interpretation of the narratives.

To primitive minds which speculated upon the "why and wherefore" of what they saw around them, the narratives of Genesis afforded an answer. They preserve, in fact, some of the popular philosophy and belief of the Hebrews. They furnish what must have been a satisfactory origin of the names Edom, Moab and Ammon, Mahanaim and Succoth, Bethel, Beersheba, etc. They explain why Shechem, Bethel and Beersheba were ancient sanctuaries; why the serpent writhes along the ground; and why the hip sinew might not be eaten. To these and a hundred other questions the national and tribal stories (of which no doubt only a few have survived, and of which other forms, earlier or later, more crude or more refined, were doubtless current) furnish an evidently adequate answer. Myth and legend, fact and fiction, the common stock of oral tradition, have been handed down, and thus constitute one of the most valuable sources for popular Hebrew thought.

The book is not to be judged from any one-sided estimate of its contents. By the side of much that seems trivial, and even non-moral (for the patriarchs themselves are not saints) it is noteworthy how frequently the narratives are didactic. The characteristic sense of collective responsibility is treated with striking intensity in a passage which uses the legend of Sodom and Gomorrah as a vehicle for the statement of a familiar problem. It will be observed that interviews with divine beings presented as little difficulty to the primitive minds of old as to the modern native; even the idea of intercourse of supernatural beings with mortals is today equally intelligible. The modern untutored native has a not dissimilar undeveloped and childlike attitude towards the divine, a naïve theology and a simple cultus. The most circumstantial tales are told of imaginary figures, and the most incredible details clothe the lives of the historical heroes of the past. So abundant is the testimony of modern travellers to the extent of which Eastern custom and thought elucidate the interpretation of the Bible, that it is very important to notice those features which illustrate Genesis. "The oriental," writes S. I. Curtiss, "is least of all a scientific historian. He is the prince of story-tellers; narratives, real and imaginative, spring from his lips, which are the truest portraiture of composite rather than individual oriental life, though narrated under forms of individual experience." There are, therefore, many fundamental facts which combine to show that the critical student can not isolate the book from oriental life and thought; its uniqueness lies in the manner in which the material has been shaped and the use to which it has been put. ♦

HISTORY, HISTORIANS, AND HISTORICAL EVENTS

from the Wisdom of Encyclopædia Britannica

*History makes us some amends for the shortness
of life.*

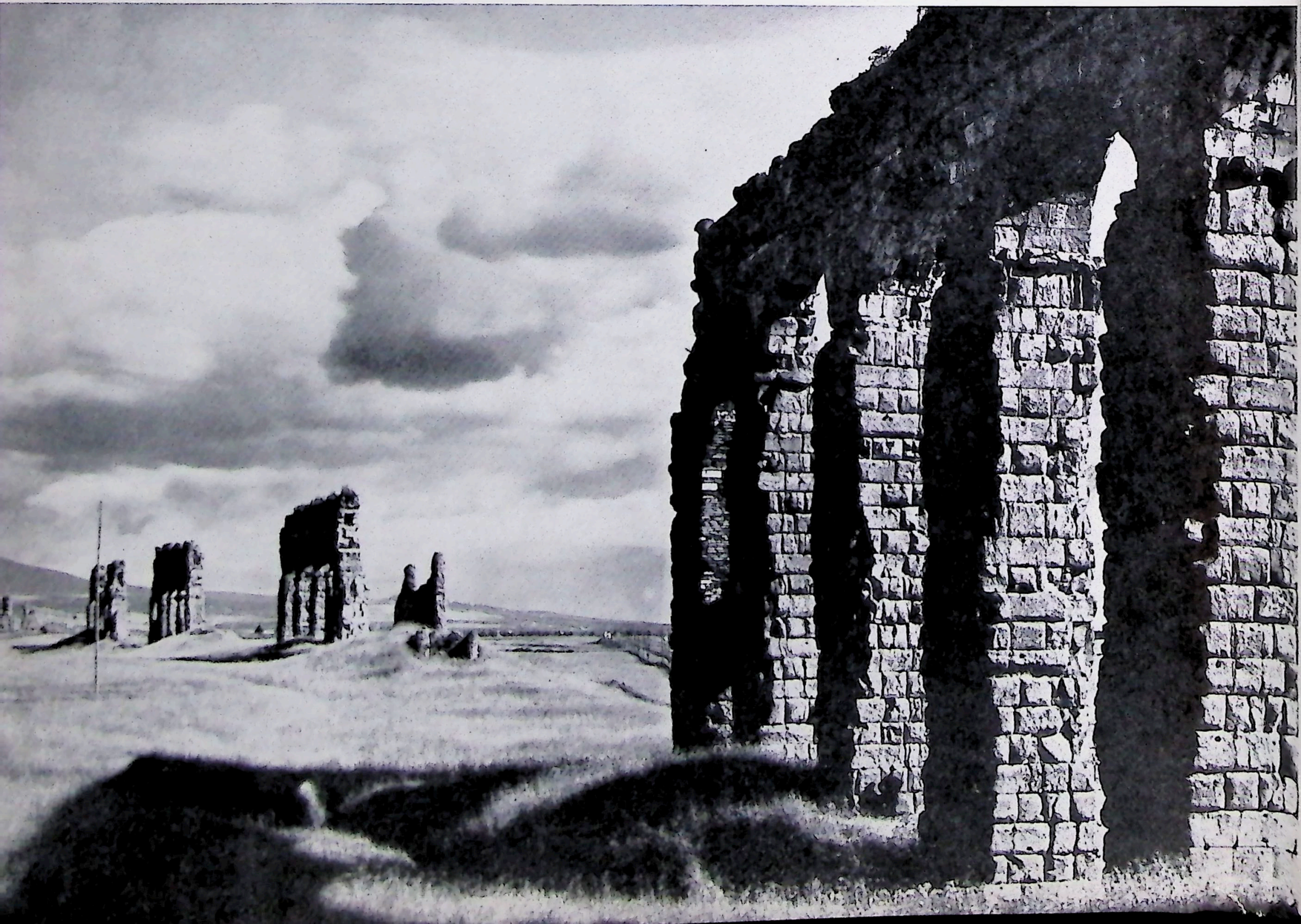
—HOWELL

THE word history is used in two senses. It may mean either the record of events or events themselves. Originally limited to inquiry and statement, it was only in comparatively modern times that the meaning of the word was extended to include the phenomena which form or might form their subject. It was perhaps by a somewhat careless transference of ideas that this extension was brought about. Now indeed it is the commoner meaning. The "history of England" is used without reference to any literary narrative. Kings and statesmen are termed the "makers of history" and sometimes it is said that the historian only records the history which they make. History in this connection is obviously not the record, but the thing to be recorded.

History in the wider sense is all that has happened, not merely all the phenomena of human life, but those of the natural world as well. It includes everything that undergoes change; and as modern science has shown that there is nothing absolutely static, therefore the whole universe and every part of it has its history. This idea of universal activity has in a sense made physics itself a branch of history.

But the tendency to look at things historically is not merely the attitude of men of science. The present outlook upon life differs in just this particular from that of preceding ages. The unstable nature of our whole social fabric is recognized, and it is therefore more and more capable of being transformed. In short, the historical spirit of the age has invaded every field. The world picture presented in the *Encyclopædia Britannica* is that of a dynamic universe, of phenomena in process of ceaseless change. Because of this insistent change all things which happen, or seem to happen, are history in the broader sense of the word. The *Encyclopædia Britannica* itself is a history of them in the stricter sense—the description and record of this universal process. This narrower meaning is the subject of the rest of this article.

The earliest prose origins of history are the inscriptions. Their permanence, however, depends not upon their importance, but



upon the durability of the substance on which they are inscribed; and as few know how to read them, they lie forgotten for centuries while oral tradition flourishes. Next to the inscriptions (sometimes identical with them) are the early chronicles frequently preserved in temples. These were of various kinds: simple religious annals, votive tablets recording miracles accomplished at a shrine, lists of priests and priestesses, accounts of benefactions, of prodigies and portents. In some cases, as in Rome, the pontiffs kept a kind of register of important political events; down to the time of the Gracchi (131 B.C.) the pontifex maximus inscribed the year's events upon annual tablets of wood which were preserved in his official residence and thus came to be a sort of civic history.

The first historians were the logographers of Ionian cities; men who carried their inquiry (*istorie*) beyond both written record and oral tradition to a study of the world around them. Their "saying" (*logos*) was gathered mostly from contemporaries; they made prose transcripts from folk memory, studying in particular the rise of Persia and the countermeasures of the Greek cities. They were the forerunners of the "father of history," Herodotus. It is easy for the student now to show the inadequacy of his sources, yet the work of Herodotus remains a scientific achievement as remarkable for its approximation to truth as for its vastness of scope. It was his chief glory to have joined to this scientific spirit an artistic sense which enabled him to cast the material into the truest literary form. In Thucydides a higher art than Herodotus' was combined with a higher science. He scorned the storyteller "who seeks to please the ear rather than to speak the truth," and yet his rhetoric is the culmination of Greek historical prose. He withdrew from vulgar applause, conscious that his narrative would be considered "disappointing to the ear," yet he recast the materials out of which he constructed it in order to lift that narrative into the realm of pure literature. Speeches, letters and documents are reworded to be in tone with the rest of the story. It was his art, in fact, which really created the Peloponnesian War out of its separate parts. And yet this art was merely the language of a scientist. His "laborious task" was that of consulting all possible evidence and weighing conflicting accounts. It is this which makes his rhetoric worthwhile, "an everlasting possession, not a prize competition which is heard and forgotten."

From the sublimity of Thucydides and Xenophon's straightforward story, history passed with Theopompus and Ephorus into the field of rhetoric. A revival of the scientific instinct of investigation is discernible in Timaeus the Sicilian at the end of the 4th century, but his attack upon his predecessors provoked a crushing counterattack by Polybius, who declares him lacking in critical insight and biased by passion. Polybius' comments upon Timaeus reach the dignity of a treatise upon history. He protests against its use for controversial pamphlets which distort the truth. "Directly a man assumes the moral attitude of an historian he ought to forget all considerations, such as love of one's friends, hatred of one's enemies. . . . He must sometimes praise enemies and blame friends. For, as a living creature is rendered useless if deprived of its eyes, so, if you take truth from History, what is left but an unprofitable tale." Unfortunately Polybius, like most modern scientific historians, was no artist. His style is often only clear in the light of inscriptions, so closely does it keep to the sources; it thus found no imitator, and history passed from Greece to Rome in the guise of rhetoric. In Dionysius of Halicarnassus the rhetoric was combined with an extensive study of the sources, but the influence of the Greek rhetoricians upon Roman prose was deplorable from the standpoint of science. Cicero, although he said that the duty of the historian was to conceal nothing true, to say nothing false, would in practice have written the kind of history Polybius denounced. History for him was the mine from which to

draw argument in oratory and example in education, not the subject of a scientific curiosity.

History writing in Rome (except for the Greek writers resident there) was until the first half of the 1st century B.C. in the form of annals. Then came rhetorical ornamentation—and the Ciceronian era. The first Roman historian who rose to the conception of a science and art combined was Sallust, the student of Thucydides. The Augustan age produced in Livy a great popular historian and natural artist and a trained rhetorician (in the speeches). From Livy to Tacitus the gulf is greater than from Herodotus to Thucydides. Tacitus is at least a consummate artist. His style ranges from the brilliancy of his youth to the sternness and sombre gravity of age, passing almost to poetic expression in its epigrammatic terseness. Yet in spite of his searching study of authorities, his keen judgment of men and his perception of underlying principles of moral law, his view was warped by the heat of faction, which glows beneath his external objectivity. After him Roman history writing speedily degenerated. Suetonius' *Lives of the Caesars* is but a superior kind of journalism. But his gossip of the court became the model for historians, whose works, now lost, furnish the main source for the *Historia Augusta*. The importance of this uncritical collection of biographies is sufficient comment on the decline of history writing in the latter empire, though classical models could still inspire writers at the Byzantine court as late as Procopius in the 6th century. Finally, from the 4th century the epitomes of Eutropius and Festus served to satisfy the lessening curiosity in the past and became the handbooks for the middle ages. Ammianus Marcellinus stands out alone in this age like a belated disciple of Tacitus. But the world was changing from antique to Christian ideals just as he was writing.

The 4th and 5th centuries saw a great revolution in the history of history. The pagan past slipped out of mind, and in its place was set, by the genius of Eusebius, the story of the world force which had superseded it, Christianity, and of that small fraction of antiquity from which it sprang—the Jews. Christianity from the first had forced thinking men to reconstruct their philosophy of history, but it was only after the church's triumph that its point of view became dominant in historiography. Three centuries more passed before the pagan models were quite lost to sight. But from the 7th century to the 17th mankind was to look back along the line of Jewish priests and kings to the Creation. Egypt was of interest only as it came into Israelite history, Babylon and Nineveh were to illustrate the judgments of Yaweh, Tyre and Sidon to reflect the glory of Solomon.

Christian history begins with the triumph of the church. With Eusebius of Caesarea the apologetic pamphlets of the age of persecutions gave way to a calm review of three centuries of Christian progress.

From the first, Christianity had a philosophy of history. Its earliest apologists sought to show how the world had followed a divine plan in its long preparation for the life of Christ. From this central fact of all history, mankind should continue through war and suffering until the divine plan was completed at the judgment day.

The commonest form of medieval historical writing was the chronicle. Often beginning merely as a series of memoranda of current events inserted in Easter tables, the chronicle might develop, either as a general history of Christendom or as a localized account of a monastic house—the individual historian was frequently a religious who wrote history from the standpoint of his own convent. Behind it might lie oral tradition, documentary collections and the testimony of contemporaries. If the monastic chronicle at times lacks perspective and tends to relate marvels, it is by no means uncritical. At the end of the middle ages, the development of vernacular chronicles, particularly town chronicles, prepared the

way for the breakdown of general histories written to the medieval theological pattern.

The Renaissance marked the first great gain, in the historic sense, in the efforts of the humanists to realize the spirit of the antique world. If an Italian humanist in the 15th century had been asked to justify his writing of history, he might have replied that it was a form of literature highly regarded by the ancients and presenting admirable opportunities for the exercise of style; that it had great value for its inculcation of moral and political lessons; and finally that the history written by his contemporaries celebrated the past and present glories of their native land or the city-state whose story they related. The political point of view and the patriotic purpose led to a new periodization of history into "ancient" (Greek and Roman) and "modern" (from the age of Constantine onward). Some humanists, such as Petrarch, regarded the modern age with disgust; but later Italians, such as Bruni and Flavio Biondo, found elements of hope in the emergence of the city-states from the commune; and Nicolaus Cusanus recognized the existence and the value



Henry The Eighth and his wife, Anne Boleyn.

of a middle age between classical times and the modern world. Nonetheless history had become the servant to literature, an adjunct to the classics.

The Reformation, with its heated controversies, seems a strange starting point for science, yet it, even more than the Renaissance, brought out scientific methods of historical investigation. It not only sobered the humanist tendency to sacrifice truth for aesthetic effect, it called for the documents of the church and subjected them to the most hostile criticism.

France had not paralleled the activity of Maximilian's Renaissance historians. The father of modern French history, or at least of historical research, was André Duchesne (1584-1640), whose splendid collections of sources are still in use. Jean Bodin wrote the first treatise on scientific history, but he did not apply his own principles of criticism, and it was left for the Benedictine monks of the Congregation of St. Maur to establish definitely the new science. The place of this school in the history of history is entirely without a parallel. When Luc d'Achery turned from exegetics to patristics and the lives of the saints, as a sort of Christian humanist, he led the way to that vast work of collection and comparison of texts which developed through Jean Mabillon, Bernard de Montfaucon, Thierry Ruinart, Edmond Martène, Martin Bouquet and their associates, into the indispensable implements of modern historians. Here, as in the Reformation, controversy called out the

richest product. Mabillon's treatise was due to the criticisms of that group of Belgian Jesuits whose *Acta Sanctorum quotquot toto orbe coluntur* was destined to grow into the greatest repository of legend and biography the world has seen. In reply to D. Papebroch's criticisms of the chronicle of St. Denis, Mabillon prepared this manual for the testing of medieval documents. Its canons are the basis, indeed, almost the whole, of the science of diplomacy, the touchstone of truth for medieval research. Henceforth even the mediocre scholar had a body of technical rules by which to sort out the vast mass of apocrypha in medieval documentary sources. Scientific history depends upon implements. Without manuals, dictionaries or easy access to texts, the modern historian would go as far astray as any medieval chronicler. The France of the Maurists supplied the most essential of these instruments. The great "glossary" of Charles du Fresne du Cange is still in enlarged editions the indispensable encyclopaedia of the middle ages.

The father of critical history in Italy was L. A. Muratori (1672-1750). His vast collection of sources prepared amid every discouragement, remains the national monument of Italian history; and it is but one of his collections. His output is perhaps the greatest of any isolated worker in the whole history of historiography.

England in the 16th century kept pace with continental historiography. Henry VIII's chaplain, John Leland, is the father of English antiquaries. In the first half of the 17th century a serious effort was made to study and exploit the national records which, until the end of the 18th century, were scattered in no less than 15 repositories. The characteristic English interest in local history and in family origins had now started; ecclesiastical and administrative history had begun to claim attention.

In the 19th century the science of history underwent a revolution. The machinery of research was perfected. Groups of scholars grew into national or international associations, producing from archives collections of material to be worked up into the artistic form of history. These faithful workers, cataloguing, publishing and indexing make it possible for the student to master in a few hours sources which baffled the long years of research of a Martène or a Rymer.

Every science which deals with human phenomena is in a way an implement in this great factory system in which the past is welded together again. But the real auxiliary sciences to history are those which deal with those traces of the past that still exist, the sciences of language (philology), of writing (paleography), of documents (diplomatic), of seals (sphragistics), of coins (numismatics) and of weights and measures and archaeology in the widest sense of the word. These sciences underlie the whole development of scientific history. Dictionaries and manuals are the instruments of this industrial revolution. Without them the literary remains of the race would still be as useless as Egyptian inscriptions to the fellaheen. Archaeology remained but a minor branch of art until the machinery was perfected which enabled it to classify and interpret the remains of the "prehistoric" age.

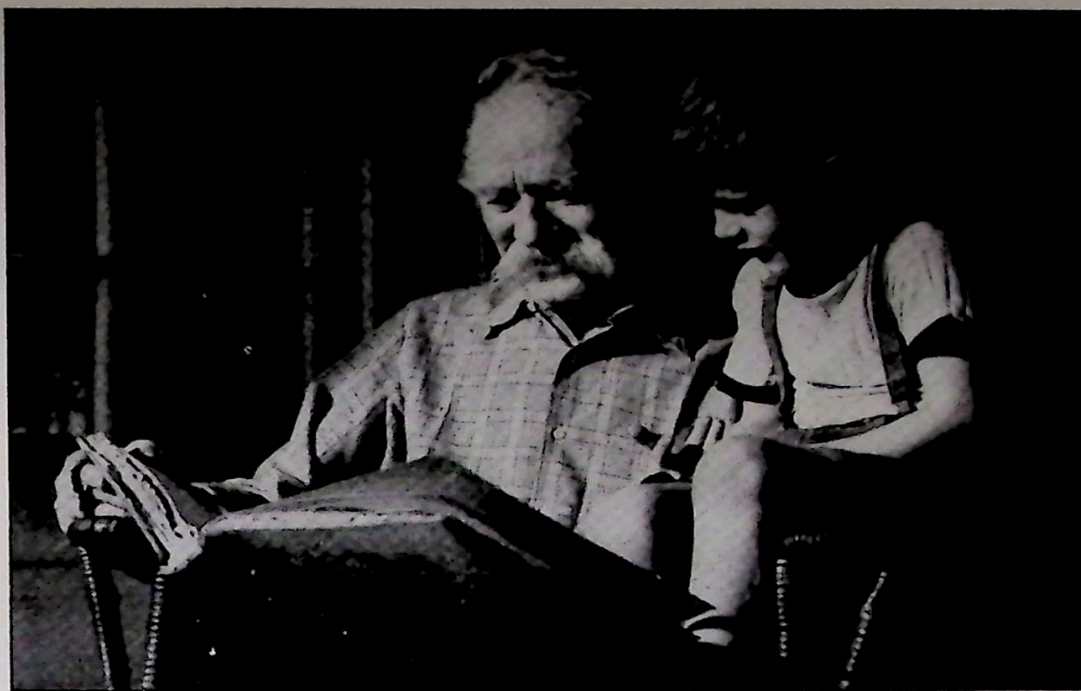
This is the most remarkable chapter in the whole history of history—the recovery of that past which had already been lost when our literary history began.

The content of history reflects the interests of the age in which it is written. Modern historians began with politics; but as the complex nature of society became more evident in the age of democracy they came to appreciate that no one branch of history is more than a single glimpse at a vast complex of phenomena, most of which lie forever beyond the range of our knowledge.

This expansion of interest has intensified specialization. Each historian chooses his epoch or century and his subject and spends his life mastering such traces of it as he can find. He can thus judge the methods of his fellows, but his own work remains restricted by the very wealth of material at his disposal. ♦

LONGEVITY

from the Wisdom of Encyclopædia Britannica



*To know how to grow old is the master-work of wisdom,
and one of the most difficult chapters in the great art
of living.*
—AMIEL

LONGEVITY, or length of days, is the prolongation of life to or beyond the standard duration. Generally speaking there is a rough correspondence between the bodily bulk and the span of life; thus the dayflies after an hour or two of "aerial life devoted to love" die, whereas the tortoise may survive for one or even two centuries; but this relation is not absolute, parrots, ravens, and geese live longer than many larger birds and than most mammals; some fish, such as salmon (100 years), carp (150) and pike (200), have a longevity contrasting with the 30 years of horses. Trees are constructed on an entirely different plan from that underlying the complex higher animals, and are thus endowed with a kind of potential immortality.

Death, the termination of life, is avoided in the protozoa by the division of the individual into two, which thus start afresh, so that the organism is immortal. But in the higher grades of the animal kingdom such rejuvenation is impossible, and the processes of senescence and death must be regarded as the penalty to be paid for their higher differentiation; they are dependent for their term of life on an inherited physico-chemical constitution, and are thus, like a clock, set for a definite period.

It is desirable to distinguish clearly between the concept of the life span and that of the average length of life. The former term is best reserved to denote the extreme limit of life characteristic of the species, say a little more than 100 years in the case of man. On the other hand, the term *average length of life* is applied to a figure computed from a life table; it measures the average number of years lived by the individuals of a large cohort of persons passing from birth to death in accordance with the mortality exhibited in the life table. The average length of life, so defined, is also often spoken of as the expectation of life at birth. Similarly, the average number of years lived beyond a given age, such as age 30 for example, is called the expectation of life at that age. While the life span has probably changed little, if at all, in all historic time, the average length of life has been greatly extended.

Presumably if all were placed under similar environmental circumstances, there would be certain racial differences in longevity. This statement is hardly capable of definite test, since the more outstanding racial differences in different parts of the world cannot

be separated from accompanying environmental differences. As to sex differences, in all civilized countries females have a lower mortality than males at most ages of life. Figures in the United States show that if deaths from causes connected with childbirth are excluded, the difference in favor of female mortality extends to all ages of life.

The two great factors influencing the length of life are heredity and environment in its broadest sense; for obvious reasons it is impossible to disentangle them and ascertain what share each of these two factors contributes. That longevity well beyond the average tends to run in families seems to be well established.

Inborn vitality may counteract the evil influences of unhealthy environment and bad habits, such as overcrowding in towns and alcoholism, and so explain the occasional longevity of those who have lived in most unfavorable circumstances. Of the hereditary factors innate vitality of the nervous and the circulatory systems are the most important; the nervous system decides the mental disposition and the reactions of the body as a whole.

One way in which environmental conditions affect longevity is through diseases contracted in the course of life. It has been stated that only those who have escaped illness up to the age of 60 years are likely to reach extreme old age. Functional activity, mental and bodily, plays an important part in postponing the advent of morbid old age, and there is more danger of rusting out than of wearing out, provided the body is healthy and the mind free from worry. The advanced ages of many dignitaries, though many may be supermen, point to the beneficial influence of long-continued activity. Among painters Giovanni Bellini, Michelangelo, and Sidney Cooper worked up to nearly their death, and Titian was painting with "incomparable steadiness of hand" when cut off by the plague at the age of 99. The same retention of productivity was seen in Voltaire, Anatole France and Goethe. Retirement, often looked forward to in early life, is a source of danger, as it may bring with it cessation from activity.

The majority of centenarians have been small eaters, and several aphorisms point to the evil, if slow, effect of being a good trencherman, such as Montaigne's "Man does not die, he kills himself" and the forcible proverb "You dig your grave with your teeth." ♦



Medical scientists are constantly developing new techniques for diagnosing diseases of the human body.

DIAGNOSIS, DOCTORS, and the human body

from the Wisdom of Encyclopædia Britannica

MAN, because of his physical and mental ills, has from time immemorial turned to the physician for aid. In the past a certain mystery or magic was associated with medical diagnosis. The modern physician, however, proceeds in a logical, rational manner, avoiding the supernatural but calling for aid not only upon medicine but also upon chemistry, physics and bacteriology. While many who are ill recover without treatment, thanks to what the ancients called the *vis medicatrix naturae*, the healing power of nature, the first step toward successful treatment is a correct diagnosis.

In making a diagnosis the physician consciously or subconsciously follows certain definite mental processes. First, he recognizes the problem which the patient presents; second, he collects data that more clearly outline the problem; third, he thinks over the facts and the possible solutions; fourth, he reasons out the implications of the suggested solutions; and lastly, he compares the actual facts with the suggestions to see if there is an identity between the facts

established and the suggested solutions. These facts are obtained from the anamnesis, or history, from the psychical and physical examination and from laboratory tests and the data obtained from the employment of instruments of precision such as the X-ray, the electrocardiograph, the electroencephalograph and similar instruments.

These are the methods of diagnosis whether the disease is to be treated by medical or by surgical procedure. The methods of medical and surgical diagnosis are one and the same; only the methods of treatment vary.

The importance of a careful history has been recognized from the earliest times. Rufus of Ephesus, who practised during the reign of Trajan (c. A.D. 100), wrote a work *On the Interrogation of Patients*, which still remains one of the classics of medical literature.

In the history, the influence of heredity is often of great importance since certain physical characteristics of individuals are transmitted from one generation to another. The thin, gracile,

sthenic type is more prone to develop certain diseases than is the heavy, muscular, phlegmatic individual who, in turn, is more likely to suffer from certain other diseases. High blood pressure and diabetes mellitus show a marked tendency to appear in successive generations of the same family. Cancer and tuberculosis show a marked hereditary tendency. Nervous and mental diseases are particularly prone to appear in certain families. Some diseases of the nervous system are always hereditary, familial or congenital. Psychoneuroses show a marked familial tendency as do certain psychoses, notably manic-depressive psychosis.

Not only should the family history be carefully noted but the past history of the patient himself. Certain diseases of childhood may give the clue that indicates the correct diagnosis.

The patient's occupation and habits, moreover, may offer clues to diagnosis. Certain occupations present definite health hazards. Those who work in an atmosphere of dust, such as coal miners, metalworkers, stonemasons and woodworkers, inhale dust particles which lodge in the lungs and may later produce severe pulmonary disease. Workers in chemical plants may suffer from acute or chronic poisoning, and painters are prone to develop lead poisoning unless proper precautions are observed. Nursery workers who spray plants with solutions of arsenic, mercury and other poisonous ingredients are subject to hazards from these poisons. It is also important to know where the patient has lived or still lives. Malaria is very common in the Mediterranean area but very rare in Labrador.

The physician investigates the history of the patient's illness. He inquires as to the symptoms, general or local; if local, where localized. Since the local symptoms are most commonly pain, the physician wishes to know where it is located, whether it is constant or occasional, whether it is sharp or dull, whether it remains localized or travels to another region.

History taking is an art of inestimable value. Some physicians estimate that the history itself contributes 50% to the correct diagnosis; others raise the percentage as high as 75. Hippocrates, the father of medicine, has left case histories of patients described so accurately that 2000 years later we can read a history and make the correct diagnosis.

Having obtained the history of the patient and of the disease, the physician next proceeds to examine the patient, using his trained senses of sight, touch, hearing and smell. In this physical examination he employs four methods: (1) inspection; (2) palpation; (3) percussion; and (4) auscultation.

Inspection is the oldest of these methods and practically the only one employed by ancient and mediaeval physicians, aided at times by palpation. It is, however, remarkable how much the trained eye can reveal without even questioning the patient. Sir Arthur Conan Doyle, who was a physician, tells us that Sherlock Holmes was inspired by one of his teachers, Dr. Joseph Bell, whose uncanny powers of observation made an indelible impression upon the young medical student. Jean Nicholas Corvisart, the celebrated physician of Napoleon I, while examining a portrait one day remarked, "If the painter has been accurate, the original of this picture died of heart disease." Subsequent investigation proved he was correct.

The ancients devoted a great deal of attention to the pulse and wrote many tomes on the subject. Paul of Aegina, who practised during the 7th century A.D., distinguished 62 varieties of pulse. While the modern physician thinks that many of these varieties were figments of the imagination, he has found that certain diseases are almost invariably associated with a certain type of pulse and that certain heart diseases have pulses that are slow or fast, small or bounding, regular or irregular.

By palpation, the physician confirms what is seen on inspection. Firmness or softness, irregularity in outline or of the surface of an enlarged organ may not be apparent on inspection alone. After palpation the physician proceeds to percussion.

Percussion, or tapping with the fingers, was discovered by Leopold Auenbrugger and described in his *Inventum Novum*, one of the classics of medical science, published in 1761. Auenbrugger, the son of an innkeeper in Graz, learned as a boy to tell how much wine there was in a cask by tapping on the end. As a physician he discovered he could tell which side of the chest contained fluid by tapping on it and that he could determine the size of the heart, the presence of fluid, pneumonia and other disease processes by this method.

Percussion of the chest reveals whether the lungs are air-containing or consolidated, whether pneumonia or pulmonary tuberculosis should be suspected, as well as whether fluid in the chest or thickening of the pleura or air in the chest may be present. Percussion is important in determining the position and the size of the heart, liver, spleen and stomach. Its value is greatly enhanced by auscultation.

Auscultation, or listening, was the discovery of René Théophile Hyacinthe Laennec, a pupil of Corvisart, who introduced percussion into medical practice in France. Laennec, according to his biographers, was watching a group of children playing on a beam in the courtyard of the Louvre. One youngster scratched the beam with a pin and the others, their ears pressed against the beam, yelled every time he scratched. Laennec, on his way to see a patient, had an inspiration. On reaching the patient's house he took a sheet of paper, rolled it into a cylinder, applied one end to his ear and the other end to the patient's chest. To his delight he heard the heart sounds perfectly and at that moment the stethoscope was discovered. He described his instrument and its value in his *De l'auscultation médiate*, published in 1819. The stethoscope remains one of the indispensable aids in the diagnosis of disease of the lungs and heart. With it the physician determines whether the breath sounds are normal or whether there are signs of inflammation, bronchitis, consolidation or cavitation in the lungs. He also can tell whether the heart sounds are normal or whether there is disease of the myocardium or lesions of the four sets of heart valves.

After the physical examination has been finished, the physician turns to instruments of precision for additional aid.

Sanctorius (1561-1636), professor at Padua, was the first physician to employ instruments of precision in the practice of medicine. Galileo, watching the swinging of the lamp in the cathedral of Pisa, counted its oscillations by feeling his pulse and established the law of the isochronism of the pendulum. Sanctorius, his colleague and friend, reversed the process and timed the pulse by the swinging of a pendulum employing a weight attached to a cord. The length of the cord, which was adjusted until the rate of the oscillation agreed with that of the pulse, was measured on a scale and this taken as the pulse rate. Sanctorius also employed the thermometer, probably invented by Galileo, to determine the patient's temperature and weighed his patients on a steelyard to measure accurately the effect of food, exercise and various activities upon what he called the insensible perspiration. His steelyard was a forerunner of the basal metabolism instruments now so widely employed in medicine.

Although Sanctorius published his method of estimating the pulse and determining the temperature in 1625 and his work on insensible perspiration in 1614, only the latter made much impression upon medical thinking. Accurate timing of the pulse first became a recognized procedure when Sir John Floyer published in 1707 his *Pulse Watch*, in which he stated he at first employed a sea minute

glass such as was used by mariners "but because that was not portable, I caused a Pulse-Watch to be made which runs 60 Seconds, and I placed it in a Box to be more easily carried, and by this I now feel Pulses."

Registration of the temperature lagged even further behind, the first systematic recording dating from 1852 when Ludwig Traube published the first temperature curve in fever from the Leipzig clinic.

Sir James Mackenzie (1853-1925), while a general practitioner in Burnley, England, devised an instrument with which he could simultaneously register the pulse waves in the radial artery at the wrist and in the jugular vein in the neck. By comparing the two sets of curves, the jugular pulse indicating the action of the auricles and the radial pulse the changes in the ventricles, he demonstrated the mechanism by which irregularities of the pulse were produced and made some of the most noteworthy contributions in the history of cardiology.

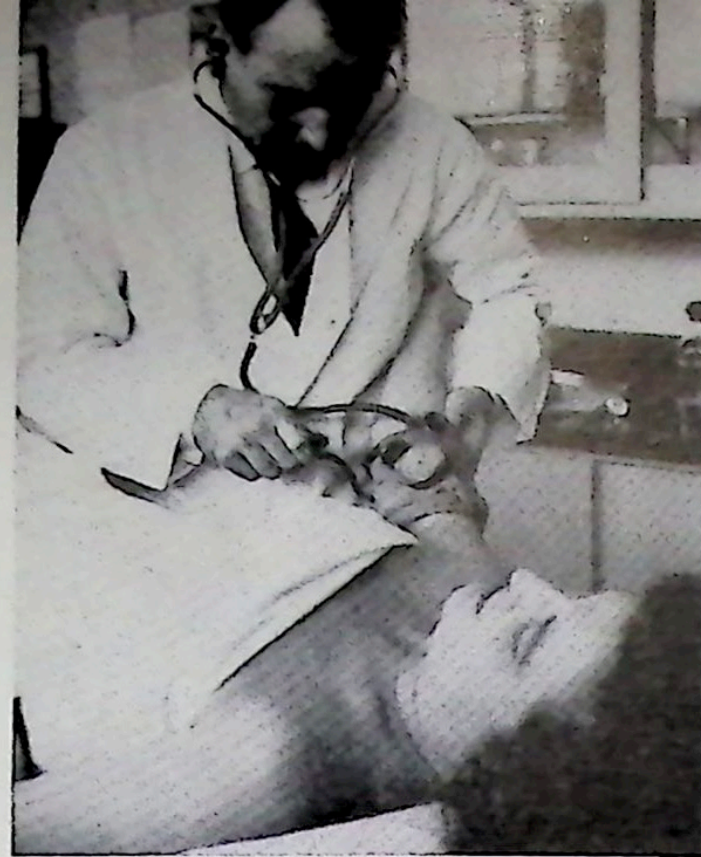
Taking the blood pressure is an important feature in the examination of the patient. While the skilled physician in the past could tell whether the blood pressure was elevated by palpating the pulse, this method was inexact and often misleading. In 1896 Scipione Riva Rocci devised the instrument in use today, a rubber bag surrounded by a cuff, which is pumped up until the pulse disappears at the wrist—the systolic pressure. Later it was found that by listening at the end of the elbow, systolic pressure as well as diastolic pressure could be estimated. The systolic pressure is the pressure during the systole or the beat of the heart, the diastolic pressure that during diastole or the pause of the heart between beats.

No study of the heart or circulation is complete without the records obtained with the electrocardiograph. Augustus D. Waller in 1887 showed that an electrical current produced by the beating of the heart could be demonstrated in man by attaching electrodes to the body and connecting them with a capillary electrometer. Willem Einthoven in 1903 substituted for the capillary electrometer a string galvanometer of his own design, and the electrocardiograph became a practical clinical instrument. In the original instrument the feeble current coming from the body through the arms and leg was carried into a quartz string placed in a magnetic field. Each heartbeat causes a vibration of the string, whose movements are photographed on a moving film or sensitized paper—the electrocardiogram. Later improvements consisted of employing tubes similar to those used in radio which step up the weak current until it moves a more sturdy string than the original delicate quartz fibre, or even marks directly upon prepared paper. The latter method avoids the inconvenience of photography and allows the physician to watch the record as it is being written.

The information obtained from study of the electrocardiogram is amazing. It shows whether the heart is enlarged, where the enlargement occurs, whether the heart action is irregular and where the irregularity originates, whether an occlusion of a coronary vessel is present and if so where the occlusion is located, whether a slow rate is physiological or caused by heart block. It also indicates high blood pressure, thyroid disease and certain types of malnutrition.

One of the latest instruments of precision, the electroencephalograph, was first described in 1929 by Hans Berger of Jena. It records the electrical activity of the human brain and has been of especial value in the diagnosis of epilepsy and in the location of lesions of the brain, such as tumors, abscess or hemorrhage.

No method of examination has given greater aid in the field of general diagnosis than the X-rays or Röntgen rays, discovered by Wilhelm Konrad Röntgen in 1895. Three months after the discovery the *Journal of the American Medical Association* wrote somewhat pessimistically, "Half an hour is the shortest exposure possible and



The doctor measures pressure of the blood, an important feature in examinations of patients.



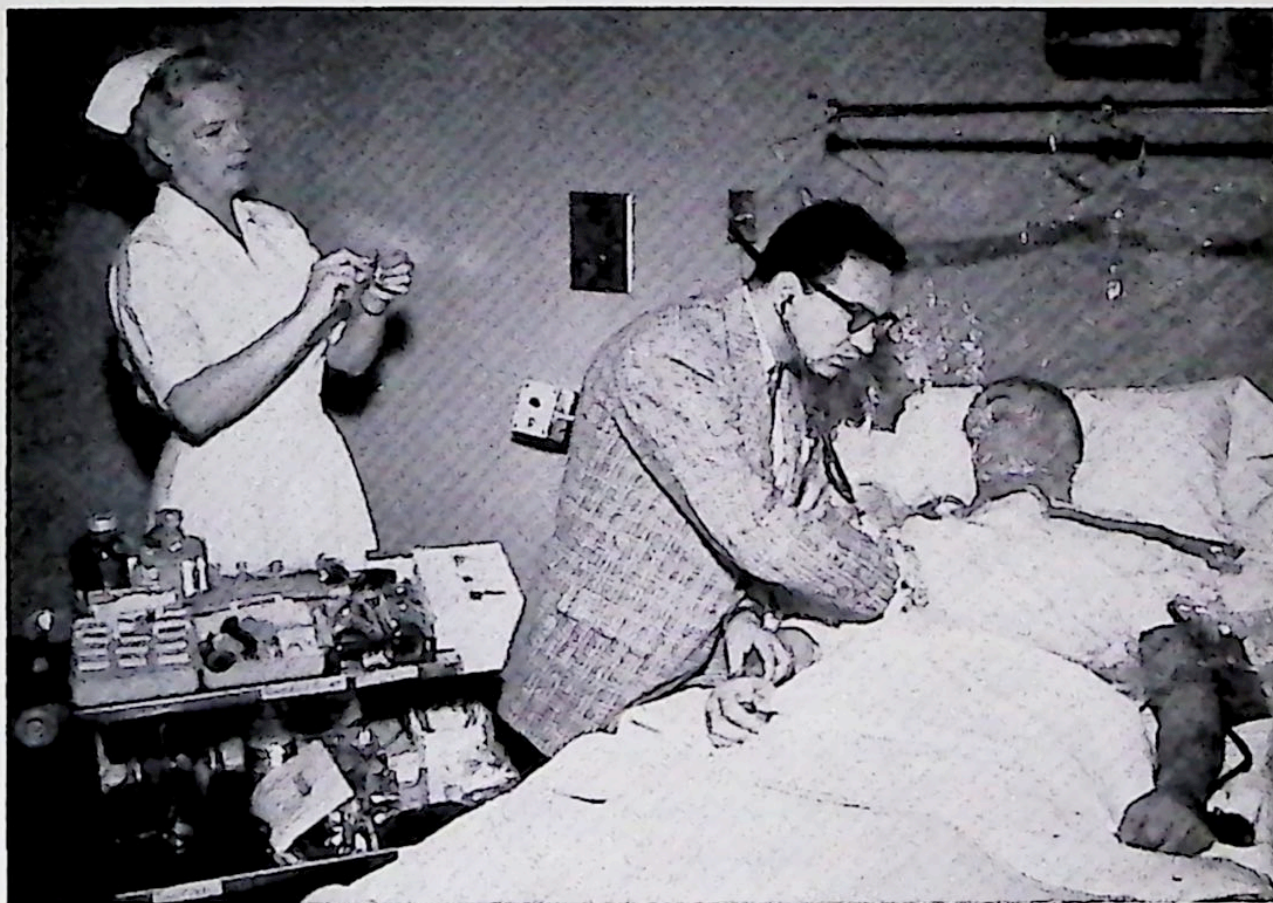
The skilled bacteriologist can detect microscopic clues in blood, body fluids, or tissue.

Before operating, the surgeon studies the history of the illness and makes his diagnosis.



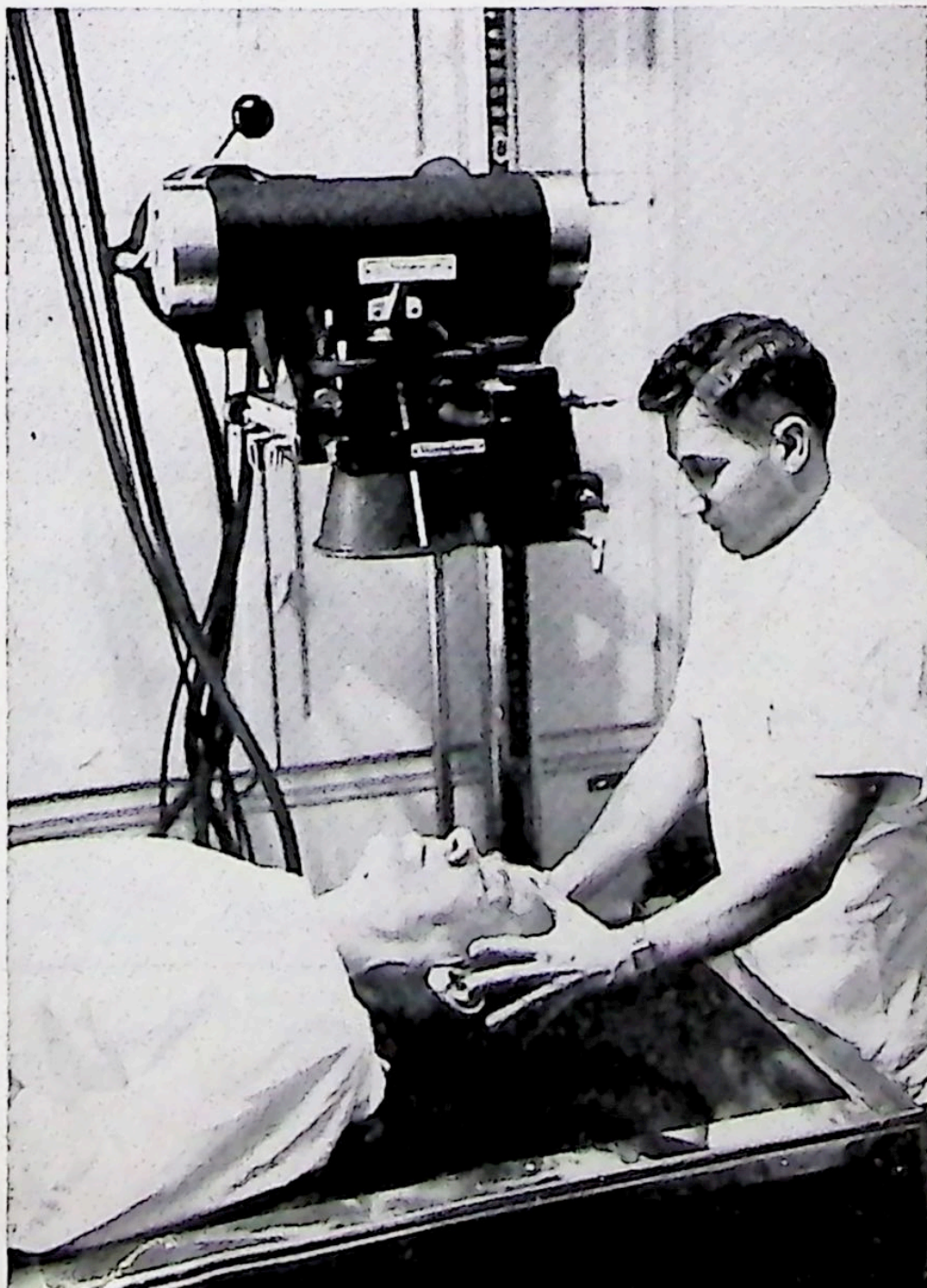


The laboratory technician, dressed in sterile garments to protect drugs from contamination, examines an antibiotic solution.



The stethoscope remains the indispensable aid in the diagnosis of disease of the lungs and heart.

No method of examination has given greater aid in the field of general diagnosis than X-rays, discovered in 1895 by Wilhelm Konrad Rontgen.



most require one hour. The electric apparatus required is so expensive, \$100 and upward, that few surgeons can use it yet in their private practice." After that time the X-ray was improved so that exposures require only fractions of minutes but, needless to say, the cost of the apparatus has enormously increased.

The original X-rays were photographs made on sensitive plates. With the development of fluoroscopy, X-ray diagnosis became even more helpful. When a patient is placed in front of the X-ray tube and behind the fluorescent screen, the physician sees clearly the outlines of the body, can watch the heart beat and note any irregularities, and can watch the lungs expand in respiration and observe whether this expansion is normal. When the patient swallows a gruel containing barium or any other substance opaque to the X-ray, the physician can follow by the shadow it casts its course from the mouth through the oesophagus, stomach and into the intestines. The X-ray demonstrates the structure of the bones of the body and lesions of the bone such as defects of structure, fractures, tumors, arthritis and inflammations. It reveals the size of the heart, irregularities and defects of the heart, pulmonary diseases such as bronchitis, pulmonary tuberculosis, collapse and abscess of the lungs, tumors of the lung, thickening of the pleura, fluid in the pleural cavity, enlargement of the liver, spleen and kidneys and stones in the kidneys, gall-bladder, bladder and pancreas.

Another method of examination, the basal metabolic test, is of great value in certain patients. The method employed consists of estimating the amount of oxygen consumed in a certain amount of time. When more oxygen than normal is consumed, the metabolic rate is increased, when less, it is decreased. It is of especial value in the diagnosis of thyroid disease.

In addition to these instruments of precision, the physician also has at his disposal the ophthalmoscope which permits inspection of the retina; the bronchoscope, which shows the interior of the bronchi; the gastroscope, which gives a clear view of the interior of the stomach; the laryngoscope, for studying the larynx and vocal cords; the cystoscope, which visualizes the interior of the bladder; and the proctoscope, which demonstrates lesions of the rectum and sigmoid.

After the physician has completed the physical examination and his examination with instruments of precision, he turns next to the laboratory for study of the blood, urine, body fluids, secretions and any tissue which was removed for microscopic examination.

The physician has now collected his data. This is the most painstaking and laborious stage in his search for the correct diagnosis. He now thinks over the facts that he has obtained and the suggested solutions.

The physician next arrives at the last stage of the mental processes required in making a diagnosis. He compares the actual facts with the suggestions that have occurred to him to see if there is an identity between such facts and the suggested solutions. If further study brought out the existence of all of the symptoms, the actual facts would agree with the suggested solution.

This is the method pursued by the physician in making a diagnosis. While the task of collecting data on the patient, the history, the physical examination, special examinations and laboratory tests require accurate observation, the above process of correct reasoning is, in the last analysis, more important. To assemble the data, to make use of the relevant and to discard the irrelevant and to pass final judgment or make a diagnosis often require a mental ability of the highest order. It is the final test of the physician's diagnostic ability. False diagnoses often result not from false data but from faulty interpretation. ♦

INTELLIGENCE

*the capacity
to comprehend and
handle relationships*

*The intelligence of the wise is like a glass; it admits the light
of heaven and reflects it.*

—FIELDING

from the Wisdom of Encyclopædia Britannica



INTELLIGENCE—as shown behaviorally by suitable responses to complex situations—is partly a matter of memory (learning or reproduction) and partly of intelligence in the stricter sense. This account concerns intelligence in the precise sense understood by the modern psychologist.

Although speculation goes back to antiquity, the first substantial scientific studies of ability may be considered Francis Galton's *Human Faculty*, in 1883, and Wolfgang Koehler's experiments on animal intelligence, in 1915. Following Galton's stimulating writings the French psychologist Alfred Binet created, in 1904, the first systematic intelligence test, and in the same year the British psychologist Charles Spearman asked the fundamental question underlying such tests, namely, "What is Intelligence?" and proposed a method for answering it. This consisted in observing statistically what mental capacities tend to go together, and it led to the theory that there does exist in human beings a single broad mental power (additional to various special abilities) which may be called general intelligence. Comparing the success of various attempts at intelligence tests shows that this capacity is revealed particularly in good use of verbal symbols, ability to perceive analogies, capacity to abstract and classify, mathematical ability, problem solving and those capacities for understanding relations and causal connections which have been increasingly invoked in the more recent experiments on intelligence.

These have become well understood through the work of such researchers as the U.S. psychologist Lewis Terman, the British psychologist Sir Cyril Burt and the Swiss psychologist Jean Piaget. There is a rapid augmentation of reasoning and perceptual ability in infancy followed by a flattening of the development curve around 14 years of age. Indeed, it is a surprising fact that after 14 there is negligible increase in the basic ability to understand the most general relationships. Nevertheless, the individual increases his actual problem-solving capacity by increased knowledge and can better perceive relations in special fields, when given close acquaintance with the particular problems of those fields. After the age of about 23 there is actually a slight decline in score on speeded intelligence tests, but, if reasoning capacity *without* speed is tested, no such decline occurs, unless and until senility supervenes.

At no age have significant differences in intelligence level been found between men and women, and it is not even certain that qualitative differences, as shown by the somewhat higher scores of men in mechanical reasoning and of women in verbal ability, may not be considered as temporary cultural effects. On the other hand, there is ample evidence from comparing the intelligence of twins with that of, for example, unrelated children reared together, that intelligence is largely inherited. Measures of intelligence are in a sense validated by the finding that what is called intelligence in educational evaluation turns out to be closely similar to what is measured by tests. Thus children drafted to schools for mental defectives score very low, selective schools average above other schools, and universities above high schools. Test scores are predictive of educational success and of occupational success in most, especially complex, occupations.

Socially there is a slight tendency for higher social class (or complexity of occupation) to be associated with higher intelligence score, even on culture-free intelligence tests, and this fits the school observation that some trend exists for better mental capacity to segregate to better social status levels. Nevertheless, the greatest absolute storehouse of high mental capacity is the lower middle class—skilled and semiskilled workers—because it is the largest class in sheer numbers.

Surveys in progress in the United States in the mid-1950s suggested that the national resources of intelligence, for supplying persons fitted for training as higher scientific, administrative and

professional personnel are not as great as was once thought. For, of persons with the requisite intelligence and monetary support to obtain, say, a medical degree, perhaps only one-fifth also have the persistence to face continuous study or the temperamental qualities to deal with the emergencies and social demands of such a profession.

From a comparison of different animal species it has long been evident that intelligence is closely correlated with the size of the cortex or that fraction of the brain which is not directly concerned with internal bodily adjustments, muscular balance, etc. Brain operations on animals show that the decline in problem-solving capacity, as well as in the ability to learn complex habits, is just about proportional to the weight of brain removed. Brain injuries in man also point to the same relationship. A particular habit or capacity may be lost through injury and may be relearned, but there tends to be a loss in general power of abstraction and problem-solving roughly proportional to the extent of cortical damage. The relation-handling capacity which is called intelligence therefore seems to be tied up physiologically with the extent, and possibly the sheer number, of brain cells concerned with associational tasks. However, individual differences in intelligence are positively, but very poorly, correlated with differences in head size (even when divided by body size), the lack of good relationship being due to the fact that the skull contains much beside cortical gray matter.

No drug was known in the 1950s that significantly increased intelligence in normal persons. Caffeine in coffee, as well as benzedrine and related drugs, produce increased problem-solving largely by improving memory and alertness, though in depressed mental patients significant improvements—returns to normal—have been demonstrated also in general intelligence test performance. On the other hand, there are many special physiological influences that will reduce intelligence. Twenty grams of alcohol will produce, in the average person, a measurable decline in intelligence test performance, or other forms of judgment; failure of thyroid secretion produces a considerable decline, as is well known through the history of cretinism; and failures of judgment are rapidly produced by anything that interferes with the supply of oxygen to the brain.

Although philosophers have been apt to describe intelligence as that which distinguishes man from lower animals, the modern psychologist cannot accept this Aristotelian dichotomy. The capacity of animals, even of the higher apes, to perceive complex relationships is far below that of adult man and seldom exceeds the level of a three-year-old child, yet it is of the same nature as the intelligence of man. Blind trial-and-error behavior, the very antithesis of intelligence, is common in animal behavior. But if animals are presented with sufficiently simple problems, such activity is observed to give way to a thoughtful pause, followed by sudden insight and rise to a new level of adaptive but untaught behavior. In Koehler's classical experiment a chimpanzee given two hollow sticks, each too short to reach a banana outside the cage, was observed thinking and then fitting one stick into the other to provide a new tool long enough to do the job. Similar switches from random behavior to "insightful" solutions have been observed experimentally in dogs and even in hens. However, the majority of complex and seemingly very intelligent things that animals do are either inherited patterns, which go wildly astray anywhere outside the natural environment, or the result of prolonged, blind, trial-and-error learning, as in most circus animals. Most of their relation-perceiving capacity is concerned with spatial or very simple causal relations and they conspicuously lack the ability to abstract, generalize and deal with relations between abstractions which makes possible man's use of general symbols in language, mathematics, etc.

This relationship was much clarified by the researches of psychologist Louis Thurstone between 1930 and 1950. He showed that, especially in adults, intelligence branches out, as it were, into

seven or eight semi-independent and distinct forms of ability. This was demonstrated by the statistical method known as multiple factor analysis, the development of which was substantially due to Thurstone.

The "primary abilities" include what may be labelled as verbal, numerical, spatial, reasoning, perceptual and other capacities of restricted form. A person may develop to a considerable extent in all aspects of one of the forms of intelligence without equivalent development in the others; though there is also some tendency for all of them to be related as different manifestations of one general intelligence. The causes of these differential developments, whether innate or depending upon interests and environment, were not yet known in the 1950s.

The measurement of intelligence and of primary abilities was first undertaken with such objectives as that of giving better guidance to pupils in school, selecting men for more complex occupations and, at the lowest levels of ability, separating children who are merely retarded in school through absence, etc., from those who are feeble-minded. The movement which then began succeeded brilliantly in a practical sense and added greatly to the theoretical grasp of intelligence and its associations. On the practical side the separation of mental defectives is far more reliable than it was, and the special needs of those who so sadly lack that minimum of intelligence necessary to take care of themselves are better understood. At the other end of the scale, bright children are also picked out with greater reliability than by ordinary examinations, and good predictions can be made of what their rate of learning will be. For example, future performance in such areas as essay writing, mathematics and classics are closely associated with level of intelligence, but drawing, geography, music and athletics are less predictable, because they depend more on special aptitudes.

The reverse procedure to that of predicting adult accomplishment from childhood performance was carried out in Terman's studies of the childhood records of well-known men of genius. These performances, compared with those of living children of known age, show that children who became geniuses showed intelligence decidedly above their age, though some (e.g., Charles Darwin, and perhaps one may add Sir Winston Churchill) did not do well in school. Genius, as the follow-up studies of highly intelligent children show, requires something more than intelligence—perhaps also that touch of madness of which Alexander Pope wrote—but intelligence is the first ingredient. Research on creative imagination has repeatedly shown it to have a considerable association with intelligence itself, though always some as-yet-indefinable, additional power is found at work. Many can understand what only a few can invent.

On the other hand, though intelligence, as capacity to comprehend, must be analyzed out from the total realm of intellectual performance, it is astonishing to see how many apparently unrelated powers are actually considerably dependent upon intelligence. Though memory can be conceptually separated from intelligence, goodness of memory in all but rote, or meaningless, memory is highly related to goodness of intelligence. The size of a person's vocabulary, for example, is an excellent indication of his intelligence. Again, intelligence operates not only in reasoning but in almost every act of perception, so that the ability to judge where a ball will be in a game of tennis involves intelligence. However, although it is clear from both human and animal psychology that by intelligence we refer to the capacity to perceive and handle relationships, and that by higher intelligence we mean capacity to handle more complex relationships, the logician has not yet come to the psychologist's aid by indicating criteria through which the "complexity level" of a relationship, in the hierarchy of relationships, can be independently stated. Until that is done, there is some degree of circularity in the definition of higher intelligence. ♦



Franklin Delano Roosevelt's dynamic personality made him one of the most popular men in the history of America.

PERSONALITY

from the Wisdom of Encyclopædia Britannica

PERSONALITY is the characteristic way of thinking and acting which identifies each person as a unique individual. Since it is the one psychological concept which embraces all the functions of the individual, it has become the basic integrating concept of psychology. Each theory or school of psychology gives a different approach to personality, yet all agree in placing it as the keystone in the arch of mental science.

The very comprehensiveness of personality makes it inevitable that different investigators will approach it in different ways. The individual reveals his personality through purposive acts, ambitions and life plans; but also through gestures, handwriting and drawing, through daydreams and phantasy. In popular usage the personality is the habitual pattern which makes a person's way of doing things immediately recognized by his friends.

Scientifically this may be treated under three different categories, each of which receives greater or less emphasis by different psychological schools. We may distinguish first the stimulus aspect of personality, or personality as it appears to others. Under this rubric come such qualities as cheerfulness, aggressiveness and excitability, as these are perceived by friends and acquaintances. Popularly, we say that a man with a good personality is one who makes a favorable impression upon others. Psychologists prefer to avoid such labels as good and bad; they find it necessary, however, to study personalities in terms of their social stimulus values. Particularly, attempts are being made to identify the qualities associated with leadership and related traits.

Other psychologists, particularly the behaviorists, have preferred to focus attention on a second aspect of personality, the pattern of responses. Thus one might try to identify the gestures, facial expressions, voice and other overt manifestations of a socially successful individual. There is no conflict, then, between the study of personality as stimulus and personality as response.

It has become obvious, however, that neither of these definitions is satisfactory. Personality as stimulus is a mixture of the individual and those who judge him; a man is not the same person to his friends as to his enemies. This approach is thus scientifically

What a piece of work is man! How noble in reason! How infinite in faculties! In form and moving, how express and admirable! In action, how like an angel! In apprehension, how like a god!

—SHAKESPEARE

unsound. The study of personality as response also encounters difficulties, because the same person, encountering the same situation, does not always respond in the same manner. Or two men may act similarly in a given environment but for quite different reasons. It is therefore held that psychologists must study personality as an inner organization of emotions, values and beliefs which determine a person's superficial responses (gestures and the like) and in turn determine his effectiveness with other individuals. An example would be that of a person who has a high degree of confidence in his ability to deal with every new problem. He will reveal self-confidence in his habitual behavior, and his friends will identify it as a paramount feature of his personality. The concept of inner organization also covers the drives, motives and wishes which impel the personality to development and achievement.

In psychological research, these three aspects are studied continuously and interchangeably. Personality is so extraordinarily complex that no single method of investigation can be singled out as the one best technique. Because of the general concern with this problem, it is appropriate to mention some of the better methods here.

It may be stated categorically that no scientific investigation has revealed any justification for studying the lines of the palm, bumps on the head, facial profile, complexion or eye color as a way of diagnosing any personality traits whatever. Personality is a complex function. There is no reason to suppose that it will ever be found related to these simple physical structures.

The obvious and practical methods of analyzing personality, as employed by the intelligent layman, are observation, interviewing and obtaining reports of previous behavior. Where this is done systematically, the total impression of the personality is usually recorded by judging specific aspects on rating scales; e.g., assigning ratings from one to five for qualities such as appearance and intelligence. In further refinements, such as repeated interviews by trained psychologists, this approach becomes very productive. For the most part, however, interview and direct observation reveal

only the superficial layer of personality, the "mask" presented to the outer world. To get at the inner organization, which is often decidedly at variance with the outer appearance, various indirect methods have been devised.

Most of these scientific techniques for investigating the inner personality depend upon an analysis of verbal expressions of the person—his ways of describing himself and others, his reports of dreams, phantasies and so on. Intrinsic to this is the belief that personality is an organized system of symbols relating the individual's picture of himself to his conception of his environment. The words with which a person describes himself or those in which he characterizes the basic nature of the world around him, thus become matters of the greatest importance.

In describing any personality we are likely to consider the matter of temperament. This is often referred to as the quality of general emotionality, and relates to the frequency, kind, intensity and duration of emotional responses. Individual variations may range from the phlegmatic, even stolid character ascribed to the traditional Briton to the volatile disposition of the stereotyped Latin. (It may be noted parenthetically that national differences in personality have generally been exaggerated.) These variations arrange themselves according to the normal or Gaussian curve of distribution; that is, in any given population there will be relatively few cases at either the stable or the volatile pole; the majority will lie close around an intermediate central point, with a gradual tapering off to the extreme cases. Barring unusual experiences, the same individual tends to fall at about the same point on such a scale from year to year.

A second important difference among personalities is that of introversion-extraversion. Carl Jung first coined these terms to describe what he considered to be contrasting types; at present it is considered more accurate to say that people vary along a scale from extreme introversion at one end to extreme extraversion at the other. Marked introversion is characterized by directing attention and interest inward, which may manifest itself as excessive daydreaming and introspection or may only amount to careful

balancing of considerations before reaching a decision. A decided tendency toward extraversion is characterized by outgoing attention and interest, responsiveness to external stimuli, especially people, and a readiness to act without thinking. Here, again, it is obvious that most people fall somewhere between the extremes. They are responsive to the external world, but also to promptings from within; they weigh alternatives before acting, but not to the point of being "sicklied o'er with the pale cast of thought." As in other traits, "typical" introverts and extraverts are the exception, not the rule.

Character and other social values are important in a description of any personality. Like other popular terms of psychological reference, "character" offers difficulties in definition. Scientifically there is a tendency to use it in the sense of conformity to the moral-ethical code; however, it also carries in many contexts the idea of perseverance and fortitude under hardship. Since these latter traits may be illustrated by "bad" as well as "good" characters in the moral sense, the moral definition is accepted by most psychologists.

Conformity to social standards of right and wrong is not a consistent feature of personality. A person who is honest in the face of financial temptation may not be honest where political power is involved. Such apparent variability may prove completely consistent, however, if examined in the light of the person's ambitions and self-evaluations. For this reason it is not practical to try to classify personalities in terms of "good" and "bad" character.

More specific values, such as religion and humanitarian and economic goals, are relatively predictable and long-lasting features of the personality. Such values are usually reflections of the child's environment: parents, teachers and friends. Nevertheless, inner needs also determine these patterns. A boy who feels a strong need for independence from paternal domination, for example, may adopt values quite opposite from those of his father.

Central to an evaluation of any of these traits is the concept of the self. Personality is that which makes each of us different from all others; the awareness of self is that region or aspect of personality within which we recognize this difference. There are no accepted quantitative concepts for estimating the dimensions of the ego, but quantitative description can be applied to some of its relationships. The extent to which love, for example, is directed outward upon others or inward upon the self, is obviously a fundamental dimension of any personality.

Dialectically, the self has existence only in relation to the not-self; *i.e.*, the external world. Perhaps the major dimension of the self is the individual's conception of his relations with his environment, his feeling of security or insecurity. The secure individual feels himself in a safe, warm, friendly environment; the insecure person feels his ego threatened on all sides by unnamed, unpredictable dangers. A secure person is likely to be relatively free from tension; whether leaning toward introversion or toward extraversion, he is not forced to go to extremes; he holds to his values but is under no compulsion to force them upon others; he enjoys life and feels that it is worth living. The insecure person lives in a world which he pictures as threatening, cold, and unfriendly. He may try to dominate his surroundings and escape his insecurity by achieving power; or he may try to avoid danger by limiting himself to a little area, to a few friends, to well-known activities.

In either case, the feeling of security or insecurity is basic to the sense of self, and will profoundly modify all peripheral traits through which the self achieves expression.

It is important to recognize that this security feeling is laid down in the earliest years of life. There is good evidence for the view that if the child acquires a feeling of security during the

first two years (through care, fondling, caressing and freedom from physical pain and parental tensions), later traumatic experiences are unlikely to cause complete personal breakdown. Conversely, a strong feeling of insecurity at this early age means that later shocks which are relatively weak may have severe effects.

The original nucleus of the self-concept appears to be the image of the child's body. Through all his experiences the visual, tactual and kinesthetic sensations of his own physical mechanism run as common threads. His environment also fosters the development of a feeling of self-unity. He is called by a name, and this name appears in connection with all kinds of personal events. Adults identify his toys, clothing and other possessions by special designations. These separate items coalesce in memory to develop the concept of self.

Pleasant sensations from the body—food, comfort, stroking and caressing—apparently play a role in the development of the security feeling; and possessions, a permanent residence and similarly stabilizing environmental factors also contribute favorably to this development. Children who feel rejected by their parents, on the other hand, are likely to get less display of affection, if they do not actually have their physical needs neglected on some occasions, and this unpleasantness contributes to an insecure self-feeling. There is also some evidence that prolonged physical illness in infancy may, by providing a constant background of pain, prevent the development of a secure ego.

If the body image is defective, *e.g.*, in the crippled child, or if it fails to meet the standards set by the parents in beauty, strength or skill, a feeling of inferiority is likely to result. A low self-evaluation is not so harmful in its impact on final personality integration as is a low security feeling. Nonetheless, many mental maladjustments may be traced to this origin. In maturity the individual may fail financially, intellectually or professionally; the resulting inferiority will have more serious results if imposed upon an insecure childhood. If there is a foundation of security, self-esteem can be restored by compensating activity in a different field.

The inner needs of the individual (desires for sexual gratification, for a feeling of security or for a high level of self-esteem) tend to disturb the equilibrium between the ego and the environment, and impel the individual to act. We may consider briefly one case: the child's desire for high self-esteem and social approval is thwarted by failure in school. Reactions to this may include such ego-defensive measures as rationalization, compensation, phantasy, projection and simulation of illness. These may be characterized as follows: in the case of rationalization, the child protects his ego by evolving excuses—"the test wasn't fair," "the other boys interfered with my work," etc.; compensation: he increases his efforts in some other line, *e.g.*, in athletics, to restore his ego level; phantasy: he daydreams of becoming a famous inventor and returning to receive the abashed apologies of his teachers; projection: he claims that the teacher was wrong, that she didn't know what the course was all about, that she prepared poorly for classes (seeing his own defects in someone else); simulation of illness: he develops aches and pains, perhaps acute indigestion, and his parents in sympathy ignore the school failure or even ascribe the failure to the illness. There are other ego-defensive techniques, but these illustrate the variety of ways by which the individual may try to maintain inner equilibrium in the face of frustration of a major impulse. Detailed knowledge of these mechanisms was first worked out by psychoanalysts, but many of them were subsequently explored and clarified in laboratory experiments.

Psychology seems to emphasize the examination of personalities according to several relatively independent aspects, such as outlined in the foregoing paragraphs, and to evaluate the factors influencing one aspect without too much consideration of their

impact on other traits. To some extent this ignores the obvious fact that personality is an intrinsic unity, and that it is virtually impossible to have one aspect function in isolation.

Observers who feel it urgent to stress the integration of personality are likely to develop descriptions in terms of types rather than traits. The type is considered as a necessary pattern, an over-all relationship within the individual—thus contrasting with trait theory, according to which a person might, theoretically at least, have any conceivable organization of traits.

Historically, it may be said that type theories go back to Galen, with his fourfold classification of sanguine, choleric, phlegmatic and melancholic personalities. Among modern writers in this field the names of Jung, E. R. Jaensch and E. Spranger stand out.

Jung unquestionably had great influence with his theory of the introvert and extravert types. As indicated above, introversion is understood as a turning inward, a focusing of attention and interest upon the self and upon subjective aspects of phenomena. Extraversion is objectively oriented, concerned with the external world. However, in this limited sense, introversion and extraversion could be simply the two polar extremes of a personality trait. Jung considered them to carry a whole complex of other characteristics in train; introverts are referred to as "those taciturn, impenetrable, shy natures." Extraverts are warm, open, impulsive, good-natured and sociable. Thus the type involves a number of traits, all having a certain logical congruence to the outstanding feature, which is the inward or outward orientation of attention and energy.

Recognizing that the postulation of only two types failed to do justice to the rich variety of observable patterns, Jung subdivided introverts and extraverts according to the relative dominance of the four psychological functions—sensation, thinking, feeling and intuition. He further conceded that in many cases, perhaps the majority, it is difficult to assign the individual to any subtype. People do not always show a clear emphasis on thinking, feeling, etc., and in fact may not even show a uniformly introverted or extraverted attitude. The theory thus is useful mostly in calling our attention to certain extremes of personality and in giving us a framework for thinking about certain trends.

The six major types and their characteristics may be summarized as follows: (1) theoretical: values the search for intellectual truth, disregarding beauty, practicality, etc.; (2) economic: seeks the utilitarian aspect of things; (3) aesthetic: finds highest values in beauty, form and harmony; (4) social: places human values highest, fosters social reform and welfare work, sympathizes with misfortune; (5) political: desires power, dominance over people; and (6) religious: values unity, feeling of absorption in a higher reality.

Type theories imply a relative arrangement of traits within the personality which is controlled by or subordinate to some key concept. It is obvious from a consideration of such theories as those of Jung, that they are useful only in emphasizing certain extreme tendencies. There are some typical introverts, some typical extraverts and a great many people who behave in an introverted manner now, extraverted tomorrow. A few individuals are obsessed by concern with specific values such as those stressed by Spranger; but the average man tries to live up to each of these values to some extent and within the limits of his mental capacity. In thinking about personality types, therefore, it is important to keep in mind that most people will not conform to any specified type.

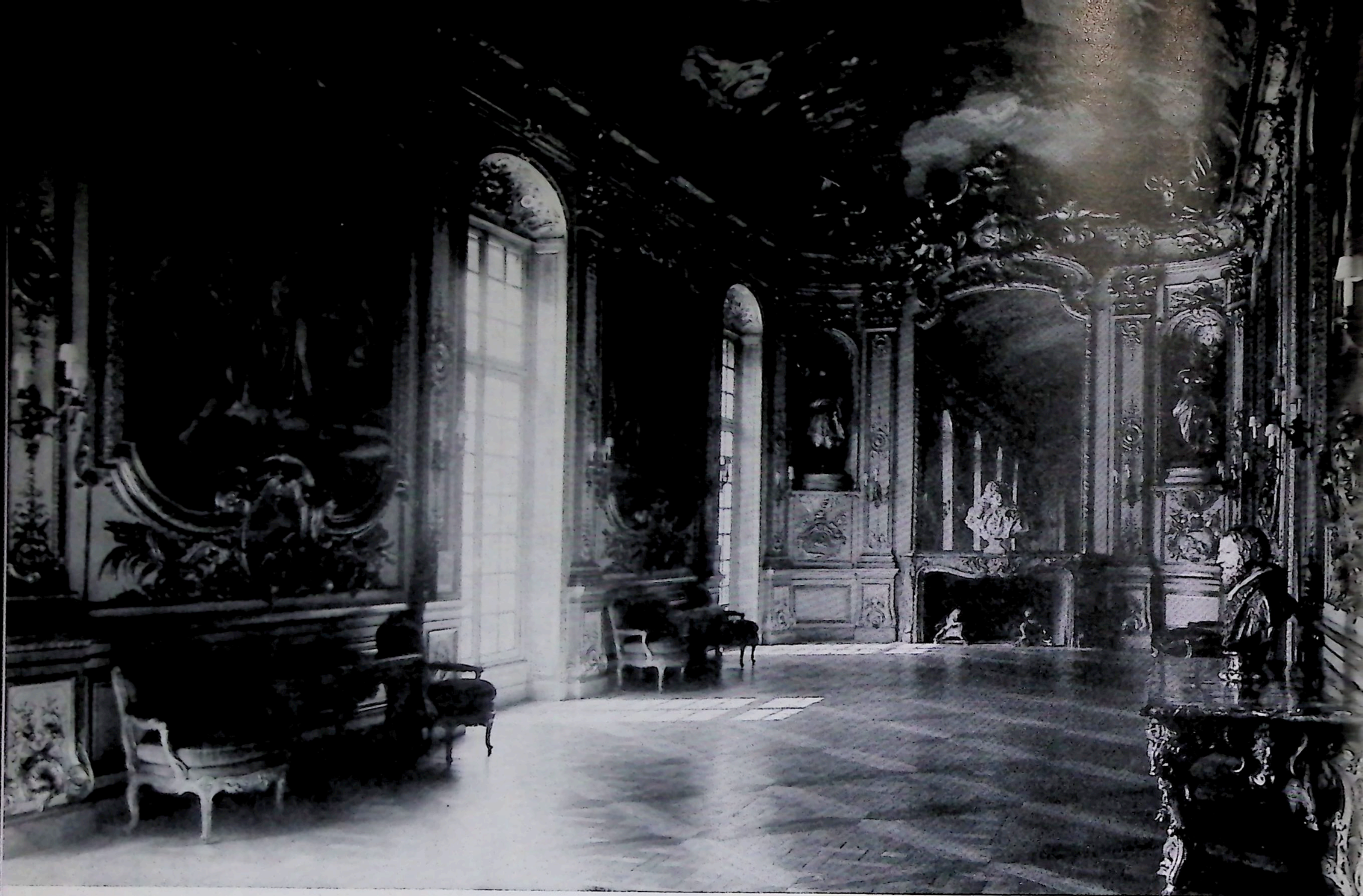
The family is important in molding personality not only because so many parent-child relations are prototypes of adult situations, but also because the child unconsciously assimilates many attitudes and social expectations there. Children are extraordinarily sensitive to vocal inflections, facial expressions and other muscle

tensions of which adults may be unaware. The division of society into men and women, bosses and workers, leaders and followers, becomes obvious to him and he develops a concept of how people ought to act when they assume a certain role. Moreover, parents impose standards of behavior; a child who does not conform is threatened with criticism, punishment or loss of love. Much of this learning goes on before the acquisition of language; it is thus unconscious in the sense that in later years the individual does not know how he developed these traits, and may even be unable to verbalize them and compare them with alternative patterns of behavior. Much learning is also repressed from consciousness (forgotten); experimentation in the sexual field, for example, is normal to young children, but severe punishment may cause the child not only to abandon habits of sexual play but also to forget that he even thought of such acts. Psychoanalysts have estimated that perhaps nine-tenths of our memories are unconscious; nonetheless, all these past experiences shape our personalities.

The school system also has its impact upon the growing child's personality. Arbitrary discipline, dictation of assignments and patterns of performance by the teacher and the attempt to treat diverse individuals as if they were all alike are only a few of the undesirable elements in this situation. Good teachers, on the other hand, may become models whom the child will imitate. The content of education is also significant. Narrow, nationalistic, prejudiced teaching in history and social studies gives the child an outlet for repressed hostility and tends to fixate his manner of thinking on a low level. Finally, the competitive system of grading, with its emphasis on invidious personal comparisons, tends to lower the self-esteem of individuals who are below average intellectually, to make egotists of the brightest children and to turn all in the direction of self-advancement without consideration for the welfare of others.

Economic conditions have been shown to have a significant effect on personalities of both children and adults. The effect of poverty, for example, is almost invariably to break down and distort the individual. The alleged beneficial effects of hardship do not exist, according to these studies. Children from the poorest homes have the most worries, the most feelings of inferiority, the most symptoms of insecurity and, of course, the most manifestations of undue aggressiveness. The mechanism for these effects is not hard to find. At least four factors can be observed at work: (1) the tensions which are felt by the parents bring about irritable behavior toward the children, who in turn feel unloved; (2) both parents may have to work, leaving the child neglected; (3) there may be actual biological frustration, such as having insufficient food, clothing and medical care; (4) inferiority feelings may arise because of social comparisons with children who have better clothes, more toys, ample recreational opportunities and the like. This is not to suggest that maladjusted personalities are never found in the upper economic brackets; obviously they are. But on a percentage basis the child in a better-class home has a better chance of reaching maturity with a well-balanced personality. In addition to economic well-being as such, other important influences on personality are found in the type of work done, job satisfaction and relationships with fellow workers.

Values, ethics, morals and character standards are all functions of social influence. With respect to these complex variables the child at birth appears to be a blank slate. His definitions of right and wrong, his conception of what is desirable and his ideas as to proper ways of obtaining what he wants come mostly from observation of others, listening to them and reading what they have written. Improvement in the environment of children, therefore, seems the most hopeful approach to the problem of developing a more emotionally mature population and a better world. ♦



ART

the creation of beauty

from the Wisdom of Encyclopædia Britannica

IN THE modern sense the term art applies only to those human activities which tend towards an aestheticism—in other words, the Fine Arts—and although, in a figurative way, we speak of the art of cooking, the art of the chase, the art of living, the art of war, and so forth, neither cooking, nor hunting, nor living, nor warfare would ever be seriously included in a list of the arts which embraces the static arts—architecture, sculpture and painting, with their subdivisions—and the dynamic arts—music, poetry and the drama.

Art is not representation, but interpretation; and it is not too much to say that art begins where the artist departs from strict imitation of nature, imposing upon her a rhythm of his own creation, according to his own sense of fitness. Nature is the artist's inexhaustible source of inspiration, but the laws which govern the work of art are wholly independent from the laws of nature. If the Pastoral Symphony is a sublime work of art, it is because Beethoven, far from imitating the sounds of nature in the manner of "programme music" (which more often than not is but remotely

connected with art), expressed the emotions awakened in him by intimate communion with nature in terms of abstract rhythm dictated to him by his inspiration and controlled by that perfect craftsmanship which is essential to the creation of a work of art.

It is true that the arts of painting and sculpture, less abstract than the art of music, necessitate a higher degree of verisimilitude to nature; but it is equally certain that the aesthetic appeal of the painter's or sculptor's work, though enhanced by the pleasure of recognition and association with familiar visual experience, is based on abstract qualities akin to the qualities of music, the difference being merely the medium—sound in the one case, form and color in the other. But whereas our ears are trained to be susceptible to the rhythmic combination of sounds and to accept the musical work of art without probing into the representational meaning of these sounds, the aesthetic education of our eyes has been comparatively neglected. Instinctively we turn to the painting or piece of sculpture with a feeling of curiosity as to its meaning. Instinctively we compare it with our own experience of natural appearance and are apt to make its verisimilitude the criterion of its artistic merit, disregarding, at first sight at least, the abstract rhythm of form and color which distinguishes the work of art from the mechanical imitation of nature. The associations of the subject are apt to blind us to the essential art qualities. If the Japanese painter looks at a landscape through his straddling legs with his head lowered to the level of his knees, it is because, through seeing his subject upside down, he is not led astray by the associations of the various "incidents" that constitute the landscape, and his attention is riveted upon the pure pattern of colors and forms. For the same reason many Western painters, in the course of their work, at times turn their canvas upside down in order to be able to concentrate on the abstract qualities of the design, which are obscured by "life-like" representation.

The function of art is the creation of beauty. Indeed, it may be said that there is no beauty outside art, or, to be more exact, no beauty that has not been revealed by art. Nothing in nature is either beautiful or ugly, for beauty and ugliness are not positive attributes of matter, but matter is invested with these attributes by the artist's emotional reactions to some outside stimulus. Beauty thus resolves itself into objectified aesthetic emotion. The artist has the power to make this emotion visible or audible to others, and to make them partake of his pleasurable excitement. We become aware of beauty and acquire the habit of transferring it from the work of art to the aspect of nature which was the source of its inspiration. We learn to see beauty in a tree, in a mountain, and even in things which, before the artist had opened our eyes, left us cold or even repelled us. A toothless old hag becomes beautiful under Rembrandt's magic touch, because he saw his subject emotionally and taught us to see it in the same way. It is doubtful if anybody found anything but dinginess and "ugliness" in the mist and fog of the Thames-side in London before Whistler, by the work of his brush and the poetic imagery of his "Ten o'clock Lecture," invested the murky London atmosphere with permanent beauty.

To go farther back, it is extremely doubtful whether the otherwise highly cultured anthropocentric Greek mind that evolved the ideal type of human proportions, which to this day remains the standard of perfection, was capable of discerning any beauty in the inanimate world. The Greek artist aimed at a perfection of symmetry and rhythm which was beyond the reach of nature. When, therefore, he borrowed any forms from nature, he evolved from them a stylistic formula representing the ideal type of these

forms—an ideal which has no counterpart in actual existence. Greek ornament, architectural and otherwise, owes its origin to this attitude.

Until the dawn of the Renaissance in Italy the beauty of mountain scenery was a closed book to the mediaeval mind. A mountain was a thing to be shunned, an impediment to traffic, a source of danger and fatigue. Even a poet of the stamp of Petrarch found it necessary, in a long letter, to plead, as an excuse for his eccentricity in undertaking an unnecessary mountain expedition—an almost unheard-of adventure in his days—the example of Philip of Macedonia, who had ascended Mount Haemus in a similar spirit of enterprise. But this letter, which fills ten printed pages, while containing much information about the hardships, dangers and fatigue of the expedition, and theoretical reflections which might as well have been penned at the desk in his study, includes no hint of emotional response to nature in her most majestic moods, no description, no word of aesthetic appreciation. Petrarch in this proved himself the child of his time. Mountains only became beautiful in the eyes of mankind after Giotto and his followers had introduced them into their pictures to replace the traditional gold backgrounds of early mediaeval art. Art had then once more fulfilled its educational mission.

That beauty is not an attribute of nature, but of art, or of the artist's mind, need scarcely be demonstrated. If it were not so, it would be an immutable value, not subject to fluctuations. Yet, not only does the ideal of beauty change with successive generations, but it varies with races and individuals. It is only the beauty values set up by art that remain permanent, and their appreciation is largely a matter of artistic education.

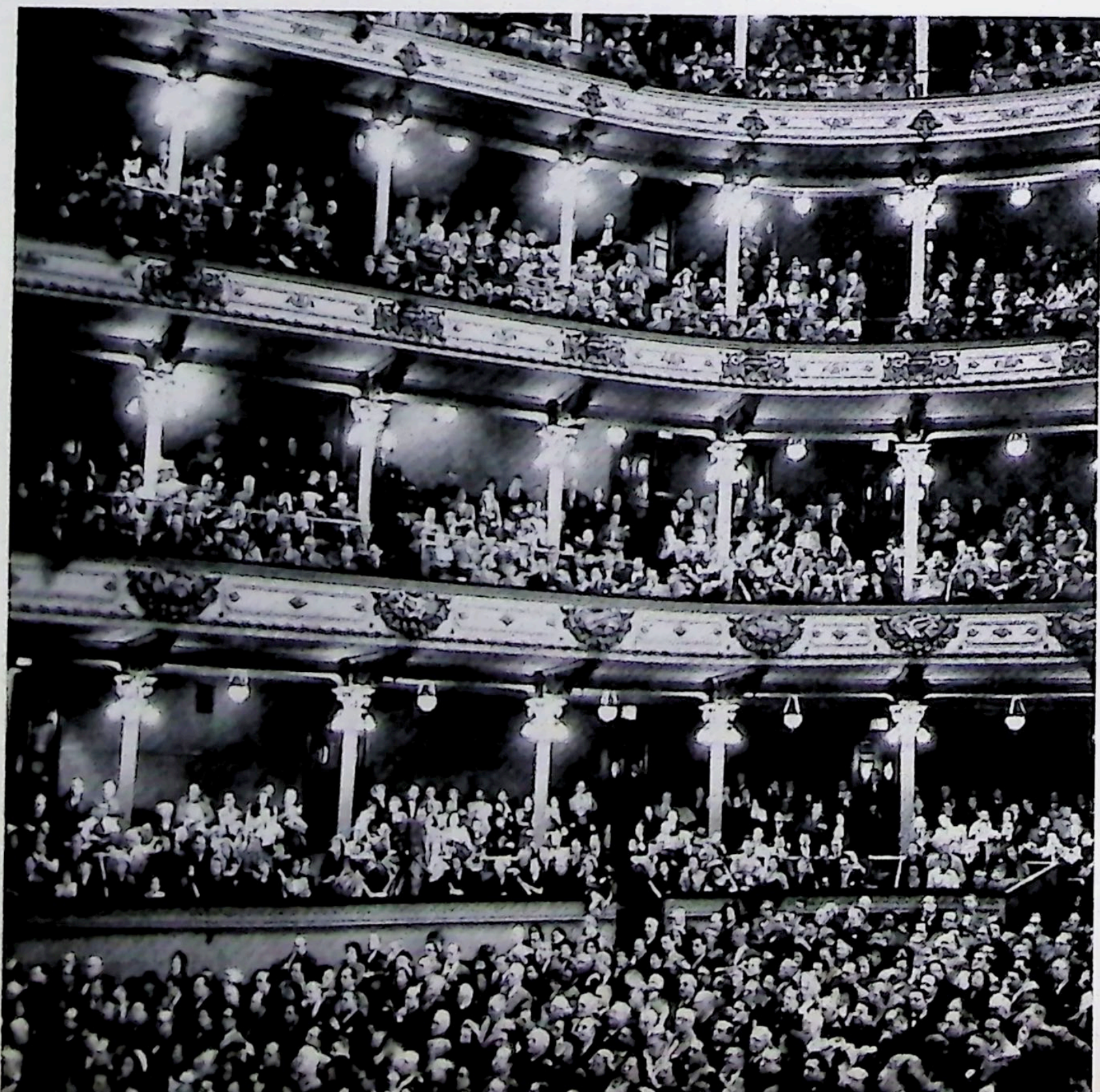
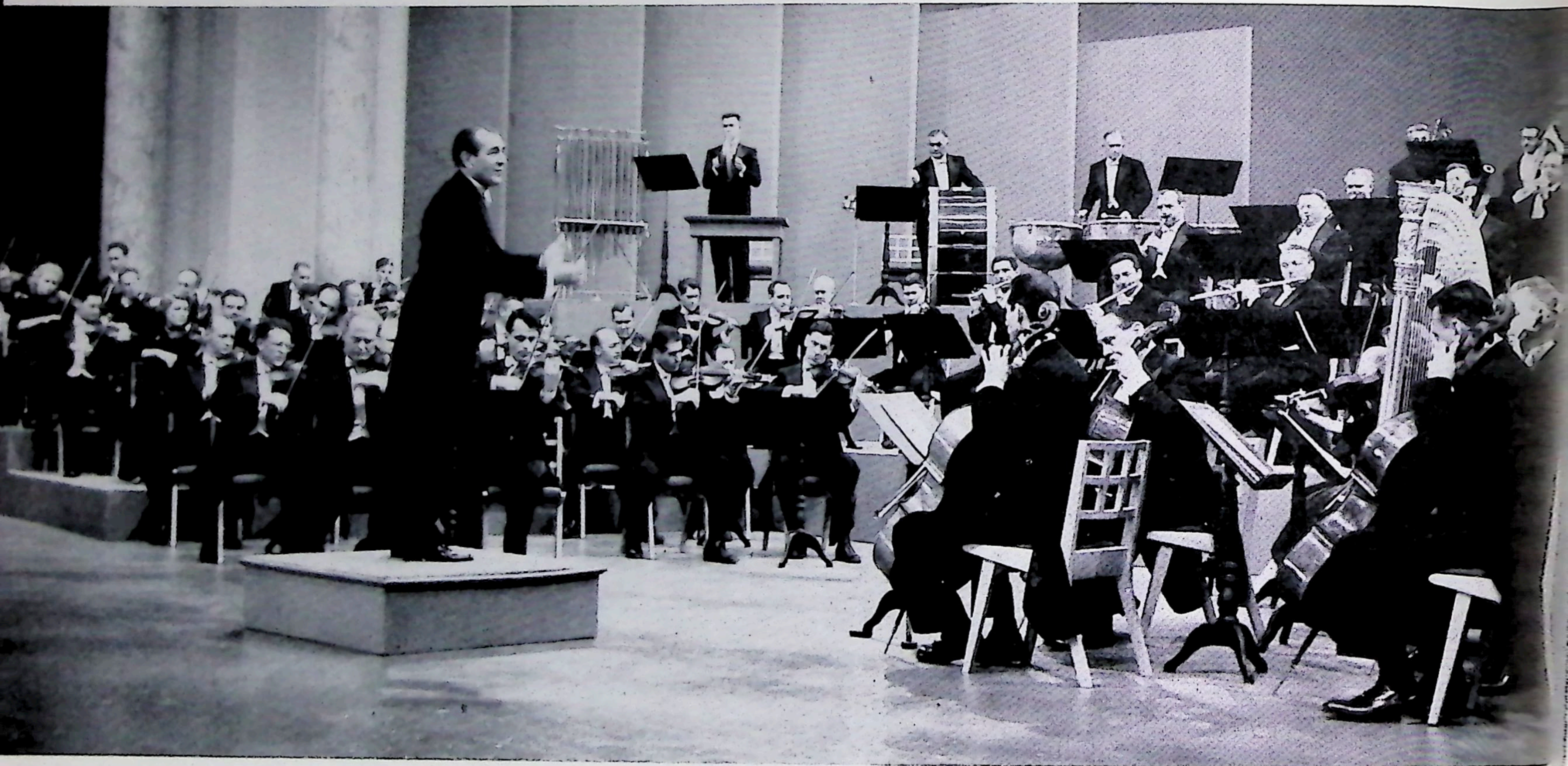
The function of art is almost as difficult to define as the meaning of art. The main purpose of art is to give pleasure; and for this reason art is held by many to be a useless luxury for the idle. From a materialistic point of view art certainly is useless, in so far as it produces nothing of a strictly utilitarian character.

Yet art is, and has always been, an indispensable need of humanity. It is implanted in the soul of the child, as in that of primitive man. It is as necessary as articulate speech. It is indispensable to civilization. It is the art of each race that gives its civilization its distinct character and rhythm. It reflects, if it does not actually condition, the whole manner of life of a nation or period. Life and art are closely, inseparably interwoven, but life passes—the life of individuals and the life of nations—and art remains. It is the only thing that is permanent; and our knowledge of the past, of civilizations that have flourished and disappeared, is derived almost entirely from the fragmentary relics of their art. It is not from printed books that we visualize and form our estimate of the life, culture and character of ancient Egypt, Assyria, Greece or Rome, but from the ruined buildings, carved stones, half-decayed bronzes, fragments of pottery, frescoed walls, personal adornments and household objects dug out of the ground by the excavator's spade, which are of far greater and more lasting significance than the transitory effects of great wars and revolutionary political changes. History becomes a living reality to us through art. Without it, it would be a dead letter. Above all, art brings pure pleasure into the humblest life. It is a source of exaltation that raises us above the sordid realities of everyday existence. Without art, life would be intolerable, inconceivable. The human imagination requires food as imperiously as the human body, and art is the inexhaustible spring from which our imagination draws sustenance. ♦

Music resembles poetry; in each are numerous graces which no methods teach, and which a master hand alone can reach.
— POPE

MUSIC OF THE 20th CENTURY

from the Wisdom of Encyclopædia Britannica



IT HAS often been said that the 20th century witnessed as drastic a musical revolution as that of any period in history. The attitude of the public as well as the internal evidence of the music clearly showed a definite rupture with the immediate past. At first the radical new departure aroused indignant audiences just beginning to enjoy the colorful richness of the late romantic composers like Richard Strauss and Nicolas Rimsky-Korsakov and resulted in many violent demonstrations. Critics raved; composers explained; sides were taken; and societies were formed to propagate what was then called "ultramodern" music.

But even if this were not sufficient proof, a comparison of any brief portion of Arnold Schönberg's *Pierrot Lunaire* or of Igor Stravinsky's *Le Sacre du printemps* with any previous music would reveal at once how extreme the break with the past was. Yet these and other radical new works could not be easily dismissed as the misguided experiments of a few isolated eccentrics, because their novel methods soon attracted more and more followers among musicians and the public. When the nazi and soviet states in the 1930s and 1940s began to legislate against those using the newer styles, it became clear that the modernists were to be reckoned with. By mid-century, the importance of the revolution had to be admitted by almost every musician; for not a single composer had appeared since about 1920 who could write convincingly enough in the older style to win recognition. The only important late romanticists still greatly respected during this time were those like Richard Strauss, Sergei Rachmaninoff and Johan Julius Sibelius, who had become known earlier.

There were many attempts to summarize the distinguishing marks of the new music. Most of these efforts were made by adherents of one or the other of two main factions that began to take shape around 1930: the neoclassicists, who followed the lead indicated by the later works of Igor Stravinsky, and the atonalists, who followed Arnold Schönberg. Since many intelligent articles were written by the composers and their followers discussing these two points of view, both were very influential; but besides these two schools, there were a great number of independents harder to deal with in critical estimates because of their avoidance of doctrinaire attitudes. The case of Béla Bartók, whose music did not receive the recognition accorded his more discussed contemporaries until after his death, is a rather typical example of the fate of a composer not belonging to a pressure group who preferred to let his music alone speak for him. Five years after his death, Bartók was generally regarded as superior in many ways to almost every other composer of his time.

In spite of their doctrinaire tendencies, the neoclassicists and the atonalists represented the opposite poles between which much music of the first half of the century lay; and the undeniable mastery of Stravinsky and Schönberg lent their points of view considerable weight. Because both dwelt so much on the importance of musical technique, they had often been dismissed as "formalists" concerned only with pure form devoid of musical expression. Indeed, the neoclassicists were particularly condemned for their insistence on "objectivity," but this objectivity was really a way of achieving artistic dignity and distinction by maintaining an aesthetic distance from the emotions portrayed. It was similar to the type of representation of feelings used in the baroque era, and this attitude distinguished modern neoclassicism from that of Brahms, which was truly romantic in its direct expression of dynamic emotions. True to classical precepts, the new group adhered to the representation of centrally important human feelings seen through the restless rhythmic and harmonic tension of modern technique. This double exposure of past and present inevitably suggested a commentary of one period on the other with comic or, more often, with nostalgic overtones.

The atonalists, on the other hand, were concerned with intensifying and compressing direct expression to the utmost. They continued the romantic psychology of dynamic emotions but focused it on the most subjective and unusual states of mind, related to the tormented, neurotic violence of the German expressionist theatre and painting. Their weird, fantastic and personal realm found its expression in a strict musical technique that was claimed to be a summation of all the devices of previous music, combining the formal methods of preromantic styles and the psychology of romantic music with the new techniques of the 20th century.

Most of the independents reflected a concern with elaborate musical techniques and with the avoidance of large-scale, opulent, romantic rhetoric. There was also a group of followers of the "populist" composers of soviet Russia who were under official pressure to avoid these "formalist" methods. These used a kind of romantic style drastically simplified, yet with certain contrapuntal and harmonic devices similar to the neoclassicists. Their works, particularly those of Sergei Prokofiev after he returned to soviet Russia in 1934 and Dmitri Shostakovich, often met with great acclaim for their very real musical values, but few of them outlasted their first flush of success.

Technically, composers of the first half of the 20th century seemed to have been mainly occupied in breaking up the relationships between the various elements of musical discourse and in reintegrating them on a level of greater freedom. The rhythmic aspect of a work often had a comparatively independent life of its own, not emphasizing the harmonic changes of the melodic flow. Harmonies were often used for their sonorous and expressive qualities and not to underline the melody. This freedom was usually ordered by new kinds of self-imposed formal and stylistic restrictions. The neoclassicists favored strict mechanical regularity of pulse while employing great liberty in the irregular distribution of accents and in all the other elements; the atonalists adhered to a strict system of ordering the tones of a composition, allowing the greatest licence in other directions.

Each element within its own domain was freed from previous limitations in order to bring out its particular expressive qualities. Rhythm became highly irregular, using either asymmetrical groupings of rather rapid regular pulsations or sought the other extreme of expressive rubato. Two main ideas were current about melody. One, accepting the classical use of a pronounced and definite melodic line, emphasized its rhythmic aspect of reiterations or escaped into the free development of motives like that of Gregorian chant. The other idea, derived from Claude Debussy's melodies of harmonies and Schönberg's "melodies of tone-color," renounced the clear definition of melodic outline, treating the total sound effect of any moment as a unit to be connected to other units as single tones are in a melodic line.

In harmony, any simultaneous grouping of tones was considered acceptable provided it gave the desired qualities of tension and expression. The movement from one chord to the next usually obscured or negated classical usages, dissonances not being prepared or resolved. When music had a tonal feeling, this was more a result of melodic emphasis on tonal centers than of functional harmonic activity.

Whether new music invented new "open" forms or adapted old "closed" ones to new needs, it was permeated by the principle of continual variation replacing the classical devices of literal or sequential repetition. The older symmetry of balancing sections was eliminated in favor of drastic shortenings and lengthenings to preserve the greater tension of the asymmetrical rhythmic basis. Texture became predominantly contrapuntal with a freedom of relation between voices that sometimes recalled the heterophonic

practices of primitive or Balinese music and more often the linear counterpoint of the middle ages. The orchestra was dissociated into sharply defined groups of colors in order to bring out the contrapuntal and linear nature of the music; the individual instruments were often treated as soloists as in chamber music.

Perhaps the most striking general aesthetic and technical feature of the period was a new attitude toward stylization. Obviously works of music had been stylized in every period, but previous composers usually drew upon the general practices of their time for the devices used to give each work its special stamp. From 1860 on, the commonly accepted methods of the immediate past began to disintegrate rapidly. Wilhelm Richard Wagner, Hugo Wolf, Modest Petrovich Mussorgsky and others added many novel features, and by the end of the century the impressionist composers Claude Debussy and Maurice Ravel had stretched the use of older harmonies to the point where they no longer fulfilled their former functional capacities of pushing toward cadences and employed them as separate sonorities much as blotches of color were used in impressionist paintings. Debussy in his later works consciously strove for a more fluid style that dispensed with classical rhythmic and melodic procedures achieving a technique that resembles the "stream of consciousness" of contemporary literature. At about the same time, Alexander Scriabin invented new chords to express his sensual mysticism, and Erik Satie and Ferruccio Busoni were demonstrating in very different ways the "objective" attitude in their works.

Around 1908 there was an outburst of musical primitivism and expressionism that paralleled the postimpressionist reaction in painting against the tenuous world of the impressionists. From this time until about 1925, each new composer strove to invent his own vocabulary of melodies, harmonies and rhythms, as well as his own grammatical rules. Each went in search of new materials and new ways of joining them, and each work provided an opportunity of carrying some technical, stylistic or aesthetic idea to its extreme limit. For a while each stylistic relativism seemed to point toward complete anarchy. It looked as if there were going to be almost as many styles as there were works written. In Stravinsky's works, for instance, the vehement barbaric ritualism of *Le Sacre du printemps* gave way to the dry humorous pathos of *L'Histoire du soldat* with its deliberate distortion of café music. This in turn led to a whole series of works related to styles ranging from Bach to Tchaikovsky and, in 1948, to an austere setting of the Mass using bits of musical Gothic.

This desire for total stylization can be seen as shaping the background of the entire first half of the 20th century, often with sensational results as in the works of Edgar Varèse or of Anton Webern, which extended stylization to the limits of unusualness, or in the later works of Erik Satie and in those of Virgil Thomson, which carried it to the opposite extreme of simplification.

Against this experimental background, however, several marked trends began to form which gave the years between 1925 and 1940 a certain unity. Around the time when Schönberg wrote his first works using the 12-tone technique in 1924, when Stravinsky had gone back to Bach in his *Piano Concerto* and when Bartók had finished his most experimental works, the *Piano Sonata* and the *Third String Quartet*, the directions became defined. Composers felt that the previous inventions needed to be explored. At this time a number of excellent neoclassicists appeared: Sergei Prokofiev before he returned to soviet Russia, Darius Milhaud, Francis Poulenc, George Auric, who followed the new aesthetic using elements of their native French popular, folk and art music, while Arthur Honegger combined this idea with a dramatic violence that brought him close to the romantic style. In Germany, where Busoni had prepared the way, Paul Hindemith turned from romanticism

in his clear-sounding, objective, contrapuntal style and treated chromatic elements in a new motoristic, vigorously rhythmic way derived from the neoclassic approach. His series of outstanding works revealed a growing preoccupation with the styles of the Renaissance and middle ages. In the United States, Walter Piston and Roger Sessions produced important and skillful works in this style. Shunning romantic attitudes, they regarded themselves as returning to the ideals of craftsmanship of earlier times.

The other important rallying point, atonalism, for a time eclipsed by the success of the neoclassicists, was also related to the earlier techniques, particularly of the Renaissance. Schönberg and his followers, Alban Berg and Anton Webern, developed a rigorous system usually called the 12-tone or dodecaphonic technique which they applied to their subsequent works. By this an entire composition is organized around a chosen order of the 12 tones of the chromatic scale, sometimes transposed, inverted or read in retrograde motion (backward). No tone can return unless separated by the other intermediate 11 tones, thus ensuring an equal distribution of emphasis on all 12. This was intended to obviate the classical feeling of tonality. The chosen "row" of 12 tones forms the basis of all melodies, counterpoints and harmonies in a given work, and its application immediately gives stylistic and motivic unity. Alban Berg's amazing feat of composing a full-length opera, *Lulu*, on one tone row revealed the enormous possibility of variety within the system, borne out by the numerous and varied works of Schönberg and Webern. Berg's music, surprisingly enough, is also quite clearly romantic in its feeling, while Schönberg's is more austere and Webern's fancifully aphoristic. Around 1940, many composers like the former neoclassicist, Ernst Krenek, and the young Italian, Luigi Dallapiccola, began to use this system as did many others in most important musical centers. It also had an indirect influence on Bartók and on the Americans, Sessions and Wallingford Riegger.

For sensitivity to stylistic differences had been very strongly developed as musicians came to know recordings of folk, primitive and oriental music, as well as pre-18th century music as it was occasionally performed under the supervision of musicologists intent on reviving the original music with its original style of interpretation. This expanded cultural and historical horizon contributed new stylistic and aesthetic ideas to many 20th-century composers, some of whom, such as Bartók, Hindemith and Krenek, were musicologists themselves.

It is beyond the scope of this article to discuss in detail the psychological and sociological background of modern music. One characteristic feature deserves mention, however—the role of the societies which were formed in almost every occidental country to encourage and propagate the new music. Many composers took a determined stand against the banalities of the contemporary popular mass culture and relied on the understanding and support of such intelligent and progressive groups of musicians and music lovers to serve as intermediates between them and the broad musical public. This reaction against the widespread public trend toward cultural uniformity (which in the musical world showed itself in the standardization of the repertoire) led many musicians to the cultivation of pronounced individuality of style. It also led them to uphold the integrity and dignity of modern art by assuming more meaningful attitudes toward artistic expression and toward contemporary life than were possible in popular entertainments or in the general run of concerts devoted to the repetition of familiar masterpieces. Hence modern music was often misunderstood by the general musical public, while the societies which supported modern music were able to distinguish its importance. The faith of these societies over the years was amply justified by the remarkable works which they brought to light and championed. ♦

PROCESS OF READING

from the Wisdom of Encyclopædia Britannica

READING is the mental process of securing and reacting to an author's message represented by written or printed symbols. To read, one must recognize words, know the meaning of the words, understand the ideas expressed by the author, sense the mood and tone of the selection, evaluate the accuracy of the ideas and use or apply them.

Children in the primary grades usually learn to read simple materials. These abilities are expanded and refined in the middle and upper grades. Many high schools in the United States began to teach reading between 1930 and 1950 and a number of colleges initiated courses to improve reading. By the mid-1950s many adult education courses included reading improvement classes, and some industrial concerns were offering reading courses to their employees. It is recognized that one learns to read, then reads to learn, and that the growth of these two abilities continues from childhood into adulthood.

Studies show that pupils' attainments in reading at various grade levels differ widely. Some at the end of first grade may be reading as well as the average of those in third grade. By the fourth grade a few pupils are reading at first-grade level, others at second, several at third and many at fourth. In addition, a number will attain scores at fifth, several at sixth and a few at seventh and eighth grades. Arthur I. Gates pointed out that all pupils go through the same stages in learning to read, but that individuals vary in the rate at which they master successive stages.

Usually the stages are not clear-cut, but each merges gradually into the next. The first stage is called reading readiness, or preparation for learning to read. Much of this preparation takes place in the home, but kindergarten is also an effective aid. Pupils who are not judged ready to read usually have additional preparation in first grade. Mental, social, emotional and language maturity appropriate to the average pupil of six years is considered optimal. An interest in books and in printed words is usually exhibited at this time.

The second stage is that of learning to read. During this period, children learn to recognize about 300 words by sight. In addition, their interest in reading increases, and they become thoughtful about what is read. Gradually, as this stage progresses, children learn to read simple books independently.

During the third stage there is considerable progress in learning to do good oral reading and rapid silent reading which is fully understood. Sight vocabulary increases to 1,500–2,000 words. Concurrently, pupils learn the skills necessary to figure out independently the words in their speaking vocabulary. At this stage pupils begin to use reading as a tool in other school subjects, to satisfy their curiosity and for pleasure.

The fourth stage is characterized by the acquisition of more mature reading interests and tastes. During this period all of the

previously learned abilities are refined and enhanced. Word recognition is gradually increased; knowledge of meanings is extended and precision of meaning is acquired. Understanding or ability to interpret grows as the reader secures a better background against which to evaluate what he reads. He is able to apply new knowledge acquired from his reading to assist him in adjusting his attitudes and behavior. His reading interests become broader and, in worthwhile areas, more intensified. He begins to become what William S. Gray described as the mature reader.

Oral reading predominated during the early periods. Books were scarce and expensive, so reading was shared by many through listening. Early in the 20th century, scientific studies revealed that the processes of oral and silent reading were different. In the meantime, many educators criticized word calling which was done without a knowledge of the meanings expressed. Beginning about 1920, emphasis was placed on silent reading and oral reading was not considered important. Standardized tests of reading had been devised and were used to appraise growth in reading by different methods. Furthermore, studies of learning revealed that young children tend to grasp ideas or units as a whole and later to identify the elements composing the unit.

Recognition of words is basic to the other skills in reading, but it is useless unless the meanings of words are known. Thus in effective teaching word meanings, often called vocabulary, are taught throughout school. Not only in the reading period is this true, but teachers of all subjects in which reading is used teach the meanings of unfamiliar words. Best results are achieved when children and young people have direct rather than incidental instruction in word meanings. However, independence must be developed as pupils progress in school so that they may continue to expand their reading vocabularies throughout life.

Comprehension and interpretation of printed and written materials are taught from the early school levels on through high school, and sometimes in college. At first the materials used are simple and within the realm of experience of the pupils. Gradually, the materials become more difficult, less familiar and even abstract. A variety of adaptations must be made. For example, in literature a student may read one selection to get the general idea; another to sense the mood and tone of the author; another to study the characters and plot; and poetry may be read orally for the beauty of the language. Thus, comprehension and interpretation may include reading to get the main idea, details, to follow directions, to arrive at conclusions, to interpret the author's ideas and feelings, to evaluate for accuracy or bias or for the appreciation of the literary expression and content.

As word recognition, word meanings and comprehension improve, rate of reading usually increases accordingly. The first-grade pupil reads silently and orally at about the same rate. By third grade the average pupil begins to read silently at a rate more rapid than when he reads orally. Rate of reading for the mature adult should vary with the difficulty of the material and the purpose for reading it. For example, a person might read a novel for sheer pleasure at 300 words per minute. The same person might read an article dealing with politics at 200 words per minute. A technical article on the atom bomb might be read at 100 words per minute. Thus, the mature reader has many reading rates.

Teachers encourage pupils to read large amounts of materials of interest to them and at an appropriate level of difficulty. Thus, children learn to read widely for information, to solve problems, and for pleasure. At the upper school levels, young people are guided, by teachers and librarians, to better literature, and to sources designed to help them solve their personal and social problems. It is the aim of schools and colleges to develop refined reading tastes, and permanent reading interests. ♦

EGO *the habit of magnifying one's self*

*O popular applause! What heart of man is proof against thy
sweet, seductive charms!*
—COWPER



DIFFERENT views have been put forward as to the development of the consciousness of the self and of other selves. According to some, each of us has an immediate intuition both of his own self and of other selves. Others maintain that we each begin with an apprehension of his own self, and only arrive at an apprehension of other selves by a process of projection or ejection of our own self into other bodies, so to say. Others, again, hold that we get to know other selves and then discover each his own self by a process of interpretation based on our knowledge of others. The prevailing view among psychologists is that the two processes of knowing one's own self and of knowing other selves go on simultaneously, and that our knowledge of each is made richer by contrast with the other.

Egoism is a modern philosophical term used generally, in opposition to "altruism," for any ethical system in which the happiness or the good of the individual is the main criterion of moral action. Another form of the word, "Egotism," is really interchangeable, though in ordinary language it is often used specially to describe the habit of magnifying one's self and one's achievements, or regarding all things from a selfish point of view. Both these ideas derive from the original meaning of *ego*, myself, as opposed to everything which is outside myself. This antithesis of ego and nonego, self and not-self, may be understood in several senses according to the connection in which it is used.

Thus the self may be held to include one's family, property, business and an indefinitely wider range of persons or objects in which the individual's interest is for the moment centered; *i.e.*, everything which I can call "mine."

In this, its widest, sense "a man's Self is the sum total of all that he *can* call his." This self may be divided up in many ways according to the various forms in which it may be expressed. Thus William James classifies the various selves as the material, the spiritual, the social and the "pure." Or again the self may be narrowed down to a man's own person, consisting of an individual mind and body. In the true philosophical sense, however, the conception of the ego is still further narrowed down to the individual consciousness as opposed to all that is outside it, *i.e.*, can be its object.

In the relation of the self to the not-self it may be pointed out that in so far as an object is cognized by the mind, it becomes in a sense part of the complex self-content. In this sense the individual is in himself his own universe, his whole existence being, in other words, the sum total of his psychic relations, and nothing else being *for him* in existence at all. A similar idea is prominent in many philosophico-religious systems wherein the idea of God or the Infinite is, as it were, the union of the ego and the non-ego, or subject and object. The self of man is regarded as having limitations, whereas the Godhead is infinite and all-inclusive. In many mystical oriental religions the perfection of the human self is absorption in the infinite, as a ripple dies away on the surface of water.

The problems of the self may be summed up as follows. The psychologist investigates the ideal construction of the self, *i.e.*, the way in which the conception of the self arises, the different aspects or contents of the self and the relation of the subject to the object self. At this point the epistemologist takes up the question of empirical knowledge and considers the kind of validity, if any,

which it can possess. What existence has the known object for the knowing subject? The result of this enquiry is generally intellectual scepticism in a greater or less degree, namely, that the object has no existence for the knower except a relative one, *i.e.*, in so far as it is "known." Finally the metaphysician, and in another sphere the theologian, consider the nature of the pure or transcendental self apart from its relations, *i.e.*, the absolute self.

In ethics, egoistic doctrines disregard the ultimate problems of selfhood, and assume the self to consist of a man's person and those things in which he is or ought to be directly interested. The general statement that such doctrines refer all moral action to criteria of the individual's happiness, preservation, moral perfection, raises an obvious difficulty. Egoism merely asserts that the self is all-important in the application of moral principles, and does not in any way supply the material of these principles. It is a purely formal direction, and as such merely an adjunct to a substantive ethical criterion. A practical theory of ethics seeks to establish a particular moral ideal; if it is an absolute criterion, then the altruist would place first the attainment of that ideal by others, while the egoist would seek it for himself. The same is true of ethical theories which may be described as material. Of the second type are those which advocate self-preservation as the ideal, as contrasted with modern evolutionist moralists who advocate race-preservation.

Again, we may contrast the early Greek hedonists, who bade each man seek the greatest happiness (of whatever kind), with modern utilitarian and social hedonists, who prefer the greatest good or the greatest happiness of the greatest number. It is with hedonistic and other empirical theories that egoism is generally associated. As a matter of fact, however, egoism has been no less prominent in intuitional ethics. Thus the man who seeks only or primarily his own moral perfection is an egoist *par excellence*. Such are ascetics, hermits and the like, whose whole object is the realization of their highest selves.

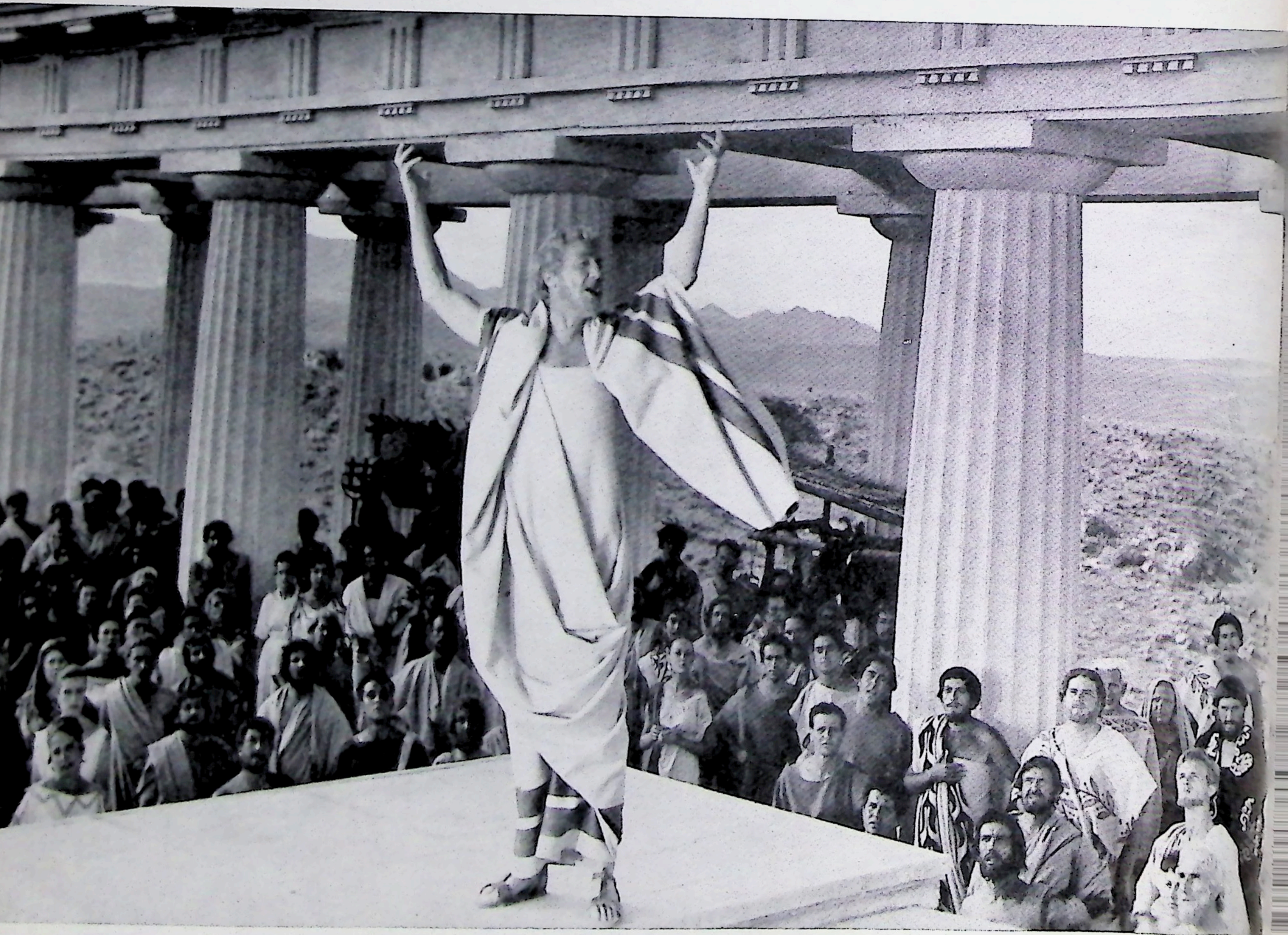
The distinction of egoistical and altruistic action is further complicated by two facts. In the first place, many systems combine the two. Thus Christian ethics may be said to insist equally on duty to self and duty to others, while crudely egoistic systems become unworkable if a man renders himself obnoxious to his fellows. On the other hand, every deliberate action based on an avowedly altruistic principle necessarily has a reference to the agent; if it is right that A should do a certain action for the benefit of B, then it tends to the moral self-realization of A that he should do it. Upon whatsoever principle the rightness of an action depends, its performance is right *for the agent*. The self-reference is inevitable in every action in so far as it is regarded as voluntary and chosen as being of a particular moral quality.

It is this latter fact which has led many students of human character to state that men do in fact aim at the gratification of their personal desires and impulses. The laws of the State and the various rules of conduct laid down by religion or morality are merely devices adopted for general convenience. The most remarkable statement of this point of view is that of Friedrich Nietzsche, who went so far as to denounce all forms of self-denial as cowardice:—let every one who is strong seek to make himself dominant at the expense of the weak. ♦

RHETORIC *the art of persuading people*

*Rhetoric is nothing but reason well dressed, and argument
put in order.*

—COLLIER



from the Wisdom of Encyclopædia Britannica

RHETORIC is the art of using language in such a way as to produce a desired impression upon the hearer or reader.

The power of eloquent speech is recognized in the earliest Greek writings, but the founder of rhetoric as an art was Corax of Syracuse. In 466 a democracy was established in Syracuse. One of the immediate consequences was a mass of litigation on claims to property, urged by democratic exiles who had been dispossessed by Thrasybulus, Hieron or Gelon. Such claims, going many years back, would often require that a complicated series of details should be stated and arranged. The claimants also, in many instances, would lack documentary support, and rely chiefly on inferential reasoning. Hence the need of professional advice. The facts known as to the "art" of Corax perfectly agree with these conditions. He gave rules for arrangement, dividing the speech into five parts: proem, narrative, arguments, subsidiary remarks and peroration. Next he illustrated the topic of general probability, showing its two-edged use; e.g., if a puny man is accused of assaulting a stronger, he can say, "Is it likely that I should have attacked him?" If vice versa, the strong man can argue, "Is it likely that I should have committed an assault where the presumption was sure to be against me?" This topic of general probability, in its manifold forms, was in fact the great weapon of the earliest Greek rhetoric and it was further developed by Tisias, the pupil of Corax, as we see from Plato's *Phaedrus*. Its later developments were largely the work of Gorgias and Lysias and in a greater degree of Antiphon and Isocrates. But the detailed study of the art begins with Aristotle's *Rhetoric* (written 322–320 B.C.)

Aristotle sets out from the proposition that rhetoric is properly an art, because when a speaker persuades, it is possible to find out why he succeeds in doing so. It is, in fact, the popular branch of logic. Hitherto, Aristotle says, writers on rhetoric have concerned themselves mainly with the exciting of emotions. All this is very well, but "it has nothing to do with the matter in hand; it has regard to the judge." The true aim should be to *prove* your point, or seem to prove it.

Aristotle does not sufficiently regard the question: What, as a matter of experience, is most persuasive? Logic may be more persuasive with the more select hearers of rhetoric; but rhetoric is for the many, and with the many appeals to passion will sometimes, perhaps usually, be more effective than syllogism. No formulation of rhetoric can correspond with fact which does not leave it absolutely to the genius of the speaker whether reasoning (or its phantom) is to be what Aristotle calls it, the "body of proof" or whether the stress of persuading effort should not be rather addressed to the emotions of the hearers.

His statement, that the master of logic will be the master of rhetoric, is a truism if we concede the essential primacy of the logical element in rhetoric. Otherwise it is a paradox; and it is not in accord with experience, which teaches that speakers incapable of showing even the ghost of an argument have sometimes been the most completely successful in carrying great audiences along with them. Aristotle never assumes that the hearers of his rhetorician are the cultivated few; on the other hand, he is apt to assume tacitly—and here his individual bent comes out—that these hearers are not the great surging crowd, but a body of persons with a decided, though imperfectly developed, preference for sound logic.

What is the use of an art of rhetoric? It is fourfold, Aristotle replies. Rhetoric is useful, first of all, because truth and justice are naturally stronger than their opposites. When awards are not duly given, truth and justice must have been worsted by their own fault. This is worth correcting. Rhetoric is then (1) *corrective*. Next, it is (2) *instructive*, as a popular vehicle of persuasion for persons who could not be reached by the severer methods of strict logic. Then it is (3) *suggestive*. Logic and rhetoric are the two impartial arts; that is to say, it is a matter of indifference to them, as arts, whether the conclusion which they draw in any given case is affirmative or negative. Suppose that I am going to plead a cause, and have a sincere conviction that I am on the right side. The art of rhetoric will suggest to me what might be urged on the other side; and this will give me a stronger grasp of the whole situation. Lastly, rhetoric is (4) *defensive*. Mental effort is more distinctive of man than bodily effort; and "it would be absurd that, while incapacity for physical self-defense is a reproach," incapacity for mental defense should be no reproach. Rhetoric, then, is corrective, instructive, suggestive, defensive. But what if it be urged that this art may be abused?" The objection, Aristotle answers, applies to all good things, except virtue, and especially to the most useful things. Men may abuse strength, health, wealth, generalship.

Aristotle's method lived on in the Peripatetic school. Meanwhile the fashion of florid declamation or strained conceits prevailed in the rhetorical schools of Asia, where, amid mixed populations, the pure traditions of the best Greek taste had been dissociated from the use of the Greek language. The "Asianism" of style which thus came to be contrasted with "Atticism" found imitators at Rome. Hermagoras of Temnos in Aeolis (c. 110 B.C.) did much to revive a higher conception. Using both the practical rhetoric of the time before Aristotle and Aristotle's philosophical rhetoric, he worked up the results of both in a new system—following the philosophers so far as to give the chief prominence to "invention." He thus became the founder of a rhetoric which may be distinguished as the scholastic. Through the influence of his school, Hermagoras did for Roman eloquence very much what Isocrates had done for Athens. Above all, he counteracted

the view of Asianism, that oratory is a mere knack founded on practice, and recalled attention to the study of it as an art.

Cicero's rhetorical works are to some extent based on the technical system to which he had been introduced by Molon at Rhodes. But Cicero further made an independent use of the best among the earlier Greek writers, and he could draw, at least in the later of his treatises, on a vast fund of reflection and experience. The result is certainly to suggest how much less he owed to his studies than to his genius. Some consciousness of this is perhaps implied in the idea which pervades much of his writing on oratory, that the perfect orator is the perfect man. The same thought is present to Quintilian, in whose great work, *De Institutione Oratoria*, the scholastic rhetoric receives its most complete expression (c. A.D. 90). He treats oratory as the end to which the entire mental and moral development of the student is to be directed. Thus he devotes his first book to an early discipline which should precede the orator's first studies, and his last book to a discipline of the whole man which lies beyond them. After Quintilian, the next important name is that of Hermogenes of Tarsus, who under Marcus Aurelius made a complete digest of the scholastic rhetoric from the time of Hermagoras of Temnos (110 B.C.) in five extant treatises, remarkable for clearness and acuteness.

Hermogenes continued for nearly a century and a half to be one of the chief authorities in the schools. Longinus (c. A.D. 260) published an *Art of Rhetoric* which is still extant; and the more celebrated treatise *On Sublimity*, if not his work, is at least of the same period. In the later half of the 4th century Aphthonius composed the "exercises" which superseded the work of Hermogenes. At the revival of letters the treatise of Aphthonius once more became a standard textbook.

During the first four centuries of the empire the practice of the art was in greater vogue than ever before or since. First, there was a general dearth of the higher intellectual interests: politics gave no scope to energy, philosophy was stagnant and literature was, as a rule, either arid or frivolous. Then the Greek schools had poured their rhetoricians into Rome, where the same tastes which revelled in coarse luxury welcomed tawdry declamation. The law courts of the Roman provinces further created a continual demand for forensic speaking. The public teacher of rhetoric was called "sophist," which was now an academic title, similar to "professor" or "doctor."

Vespasian (A.D. 70-79), according to Suetonius, was the first emperor who gave a public endowment to the teaching of rhetoric. Under Hadrian and the Antonines (A.D. 117-180) the public chairs of rhetoric became objects of the highest ambition. The Rhetorical school had two chairs, one for sophistic, the other for political rhetoric. By "sophistic" was meant the academic teaching of rhetoric as an art, in distinction from its "political" application to the law courts. The sophistical chair was superior to the political in dignity as in emolument, and its occupant was invested with a jurisdiction over the youth of Athens similar to that of the vice-chancellor in a modern university. The Antonines further encouraged rhetoric by granting immunities to its teachers. Three sophists in each of the smaller towns, and five in the larger, were exempted from taxation. The wealthier sophists affected much personal splendor. The aim of the sophist was to impress the multitude. His whole stock in trade was style, and this was directed to astonishing by tours de force. The scholastic declamations were chiefly of two classes. (1) The *suasoriae* were usually on historical or legendary subjects, in which some course of action was commended or censured. These *suasoriae* belonged to deliberative

rhetoric. (2) The *controversiae* turned especially on legal issues, and represented the forensic rhetoric. But it was the general characteristic of this period that all subjects were treated alike in the style and spirit of that third branch which Aristotle distinguished, the rhetoric of "display." This academic oratory is shown under various aspects, and presumably at its best, by such writers as Dio Chrysostom at the end of the 1st century, Aelius Aristides in the 2nd (the chief rhetorician under the Antonines) and Themistius, Himerius and Libanius in the 4th. Amid much which is tawdry or vapid, these writings occasionally present passages of true literary beauty, while they constantly offer matter of the highest interest to the student.

In the mediaeval system of academic studies, grammar, logic and rhetoric were the subjects of the trivium, or course followed during the four years of undergraduateship. Music, arithmetic, geometry and astronomy constituted the quadrivium, or course for the three years from the B.A. to the M.A. degree. These were the seven liberal arts. In the middle ages the chief authorities on rhetoric were the latest Latin epitomists, such as Martianus Capella (5th century), Cassiodorus (5th century) or Isidorus (7th century).

After the revival of learning the better Roman and Greek writers gradually returned into use. Some new treatises were also produced. Leonard Cox (d. 1549) wrote *The Art or Craft of Rhetoryke*, partly compiled, partly original, which was reprinted in Latin at Cracow. The *Art of Rhetorique*, by Thomas Wilson (1553), afterward secretary of state, embodied rules chiefly from Aristotle, with help from Cicero and Quintilian. About the same time treatises on rhetoric were published in France by Tonquelin (1555) and Courcelles (1557). The general aim at this period was to revive the best teaching of the ancients. At Cambridge in 1570 the study of rhetoric was based on Quintilian, Hermogenes and the speeches of Cicero viewed as works of art. An Oxford statute of 1588 shows that the same books were used there. In 1620 George Herbert was delivering lectures on rhetoric at Cambridge, where he held the office of public orator. The decay of rhetoric as a formal study at the universities set in during the 18th century. The function of the rhetoric lecturer passed over into that of correcting written themes; but his title remained long after his office had lost its primary meaning. If the theory of rhetoric fell into neglect, the practice, however, was encouraged by the public exercises ("acts" and "opponencies") in the schools. The college prizes for declamations served the same purpose.

The fortunes of rhetoric in the modern world, as briefly sketched above, may suffice to suggest why few modern writers of ability have given their attention to the subject. One of the most notable modern contributions to the art is the collection of commonplaces framed (in Latin) by Bacon, "to be so many spools from which the threads can be drawn out as occasion serves," a truly curious work of that acute and fertile mind, and quite in the spirit of Aristotle's treatise. The popularity enjoyed by Hugh Blair's *Lectures on Rhetoric* in the latter part of the 18th and the earlier part of the 19th century was merited rather by the form than by the matter. Campbell's *Philosophy of Rhetoric*, which found less wide acceptance than its predecessor, was superior to it in depth, though often marred by an imperfect comprehension of logic. But undoubtedly the best modern book on the subject is Richard Whately's *Elements of Rhetoric*. Starting from Aristotle's view, that rhetoric is "an offshoot from logic," Whately treats it as the art of "argumentative composition." He considers it under four heads: (1) the address to the understanding; (2) the address to the will, or persuasion; (3) style; (4) elocution, or delivery. ♦

INTUITION

the power of obtaining knowledge

which cannot be acquired by either

inference or observation, reason or experience

from the Wisdom of Encyclopædia Britannica

INTUITION is the power of obtaining knowledge directly, without recourse to inference or to reasoning. Two senses of the word must be distinguished, one of them ordinary and one technical, the technical differing from the ordinary in the respect that it refers to supposedly primary or self-substantiating and not alternative sources of knowledge. These senses are: (1) the acquisition of knowledge of matters of fact without reliance on the ordinary procedures of inquiry; (2) the acquisition of knowledge of a kind which cannot be obtained by inference (e.g., the knowledge of the axioms and rules of inference employed in logic and mathematics and of the principles of morals). There are in addition two further technical senses (3 and 4), as mentioned below.

1. In its colloquial sense, as in the phrase, "feminine intuition," the word is used to refer to the capacity for making rapid and accurate assertions about matters of fact in circumstances where reliance on the standard procedure of inquiry is ruled out. It is often, perhaps usually, exercised predictively, on such matters as the outcome of horse races, impending disasters or the behavior of someone in a yet unrealized state of affairs. For final justification of a claim to knowledge about the future we have to wait for the actual outcome. But before the event one may be quite confident of the truth of one's prediction. This confidence may arise from the strength of the inference leading to the prediction. But it may be that one "just knows," that one is not aware of any inference supporting one's prediction; and in such cases one is making a claim to intuition of the event predicted. This claim is not substantiated by the correctness of the prediction; it may have been a lucky guess. It is only if a man's claims to knowledge in advance about a certain subject matter are regularly correct that a power of intuition can be ascribed to him. For there is then inductive ground for taking his conviction as a reliable index of the truth of what he is convinced about. The existence and unequal distribution of such powers are not difficult to explain. One may be

sensitive to significant features of what is currently observable without being aware of the fact (e.g., facial expression as an index of character). This sensitivity will depend in part on natural endowment (e.g., acute hearing) and in part on thorough familiarity with the subject matter in question. In this sense, then, claims to intuition arise either from implicit inference or from lucky guessing. We can only tell which, and thus on which to rely, by waiting to see if the claims are borne out significantly often.

So intuition here is not an independent source of knowledge. It is either inferential knowledge in a disguised form or not knowledge at all but guesswork.

2. In its most familiar philosophical interpretation intuition is the power of obtaining knowledge which cannot be acquired by either inference or observation, reason or experience. As such it is thought of as an original, independent source of knowledge, since it is designed to account for just those kinds of knowledge which other sources of knowledge do not provide. Our knowledge of necessary truths and of moral principles has been explained in this way.

In the first place, some necessary truths, statements of logic and mathematics, can be inferred, logically derived, from others. But not all can: there must be some uninferred statements (i.e., axioms). Furthermore, the interconnected character of the system, the derivability of statements from axioms, presupposes rules of inference. Now the truth of axioms and the validity of basic rules of inference cannot be established by inference, since inference presupposes them, or by observation, which can never establish necessary truths. So they are held to be objects of intuition. Axioms are ordinarily truisms, consequently self-evidence is taken as a mark of intuition. To "see" that one statement follows from another, that a particular inference is valid, enables one, it is said, to make an "intuitive induction" of the validity of all inferences of that kind. Other nonformal necessary truths (e.g., "nothing can be red and green all over") are also explained as intuitive inductions: we are held to "see" a universal and necessary connection through a particular instance of it.

Secondly, moral philosophers, from Bishop Butler and the Moral Sense school to G. E. Moore and the Oxford moralists, have held that moral assertions record knowledge of a special kind. The rightness of actions (or, in Moore's case, the goodness of states of affairs) is discovered by a special moral faculty, seen as analogous to the power of observation (Moral Sense school, Moore) or the power of intuiting logical principles (Oxford moralists). This theory, like that which holds logical principles to be the outcome of intuition, bases its case on the self-evident and unarguable character of the assertions with which it is concerned.

Against both theories much the same argument can be brought forward. The "axioms" of logic and morality do not require for their interpretation a special source of knowledge, since neither record discoveries: rather they record resolutions or conventions, attitudes that we adopt toward discourse and conduct, not facts about the nature of the world or man. A further argument against the theory of moral intuition depends on the markedly discordant character of the deliverances of the supposed source of knowledge.

3 and 4. Two further technical senses of the word may be briefly mentioned. One, deriving from Kant, is that in which it is understood as referring to the source of all knowledge of matters of fact not based on, or capable of being supported by, observation; that is to say, of matters of fact which observation directly or immediately reveals. The other is the sense attached to the word by Spinoza and by Henri Bergson, in which it refers to supposedly concrete knowledge of the world as an interconnected whole as contrasted with the piecemeal, "abstract" knowledge obtained by science and by common observation. ♦

BENTON OF BRITANNICA

by the Editors of Wisdom

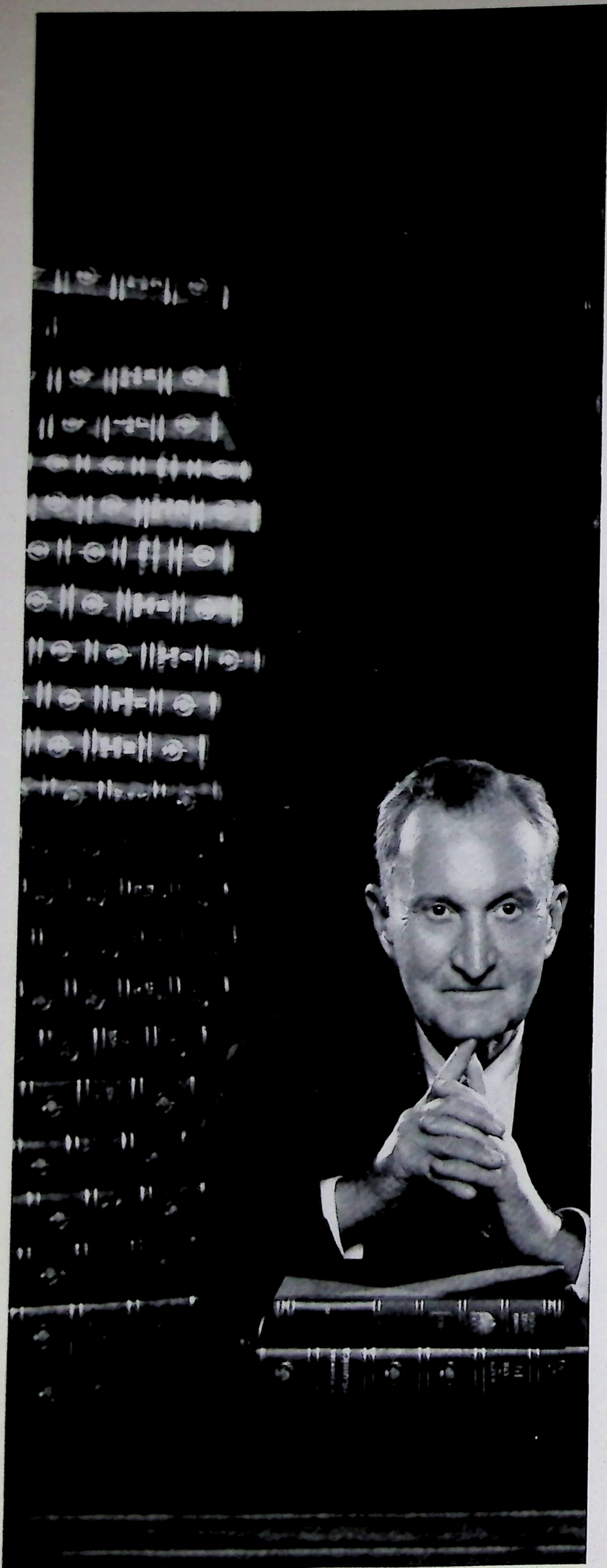
I still find each day too short for all the thoughts I want to think, all the walks I want to take, all the books I want to read, and all the friends I want to see. The longer I live the more my mind dwells upon the beauty and the wonder of the world... One's own door opens upon the wealth of heaven and earth... Life is a struggle, but not a warfare; it is a day's labor, but labor on God's earth, under the sun and stars, with other laborers, where we may think and sing and rejoice as we work.

—JOHN BURROUGHS

THE most commanding figure in American education and publishing is William Benton—one of the most extraordinary men of our time. Enormously gifted, he possesses all the manifestations of greatness: he has intellect, energy, ideas, courage, one of the finest critical minds of the century, and he has devoted the overwhelming proportion of his time to public service. His place among the world's great individuals has never been more secure than at the present. He has outdistanced all competitors as a successful publisher, and stands first on the list of American educators, above and apart from all others.

An influence, a force, a symbol, he is essentially a leader of men, gifted with an eloquent power of expression of the most winning and magnetic kind. Representing a rare collection of diversified talents and a brilliant record of distinguished contributions to the development of American education and American life, he has attained many high honors and has achieved the highest distinction as a publisher, educator, businessman, statesman, government adviser, United States Senator, philanthropist, and humanitarian. His influence upon public education has therefore been great.

The *Britannica* has made Benton's fame and prestige secure. His work as an encyclopedia publisher is in sharp contrast with that of all his contemporaries. He has fought all his lifelong a singlehanded battle against what he judges to be the public's lack of interest in higher education. He sets himself squarely against the educational apathy of our day, and throws the whole weight of his powerful intellect, his great learning and imagination, into the task of converting the *Encyclopaedia Britannica* to an essential part of everyone's life. The awe inspired by the richness of Benton's



William Benton by Karsh

mind is apt to be deepened by the knowledge that the noble *Encyclopaedia Britannica*, to which English-speaking races point as their greatest single literary achievement, was brought over to the United States by book salesmen, and might have perished if Benton had not had his way. Believing that the encyclopaedia is the true medium to be depended upon for preserving mankind's knowledge, he took up the torch of *Britannica*, which had been kindled in Scotland nearly 200 years ago, and carried it flaming into new regions of research, editing, writing, and illustration. By insistence upon the view that education is the greatest weapon for the attack upon ignorance and war the world has ever seen, by eloquent illustration and fiery defense of it, he has led the American people to a new understanding of the meaning of education, and awakened them to a new desire for learning.

The reason for his success is apparent. An eager, inventive, fertile, and brilliant spirit of boundless audacity and great moral ardor, he puts his superior knowledge to a humane purpose, and this knowledge is not the hoarding of accurate data but an integrated experience of life—education, politics, business, philanthropy, world affairs—presented in its relation to personal judgments of value. Benton does not rest on his laurels, nor does he allow the applause of the public to turn his head. He is pleased with his success, of course, but he is too excellent a critic to overlook the shortcomings of his work and too wise a man to accept the verdict of the majority for more than it is worth. These characteristics may be a gift from God, but they are regulated by a strong will, steadiness in living, fundamental human decency, and common sense.

The power of attracting admiration is largely due to a certain strength of character which shows itself in Benton's educational ideals, in his style of idea development, in the just appreciation of his criticism, and in his singularly correct sense of conduct. Extremely sensitive to the spirit of his age, he is a born diplomat who affects no poses, a charming conversationalist, dignified, immaculate, a perfect example of the highest order of American businessman. Unlike most businessmen, his social conscience is greater than his desire for money. Benton's friends think that it is because he comes from a long line of educators that he gave up his chance to amass millions in his thirties and turned to the business of education. An overwhelming urge for noble causes and public service must have been bred into him.

William Burnett Benton, born in Minneapolis, Minnesota, on April 1, 1900, was the first of nine generations of Bentons not born in the State of Connecticut. The Benton family originated in England from which Andrew Benton emigrated to America in 1638. Other Bentons soon followed and settled in Connecticut, near Hartford and Guilford, where succeeding generations of the family entered the teaching profession or became ministers and missionaries.

His grandfather, William A. Benton, the clergyman for whom he was named, graduated from Yale Phi Beta Kappa, and, prior to his ordination as a Congregational minister, served as principal from 1843 to 1845 of the Fairfield Academy near Southport, Connecticut, just two miles from the present Benton home. Several years later Reverend Benton and his wife, one of the first medical missionaries, were assigned to service in Asia Minor by the American Board of Congregational Foreign Missionaries. Their labors as missionaries continued over a period of twenty years among the Mohammedans on Mt. Lebanon, then under Turkish rule.

Charles William Benton, his father, was born in Tolland, Connecticut, in 1850. Educated at Yale, he won the undergraduate award as the best linguistic scholar and could write three degrees after his name. Charles Benton became an ordained Congregational

minister, and although there was a long tradition of missionary service in the Benton family, at the age of thirty he resigned from the ministry and left Connecticut. He ventured to the Mid-West and settled in Minneapolis where, in 1880, he became a professor at the University of Minnesota. He spent the rest of his life on the faculty and for most of the thirty-three years was Chairman of the Department of Romance Languages.

Here Charles Benton met Elma Caroline Hixson, the daughter of Daniel Webster Hixson, at one time the Democratic leader in the Minnesota State Senate. At the age of thirteen, and with only a limited education herself, Elma Hixson became a teacher in a one-room country school in Iowa. Among her pupils were farm boys, several years her senior, who attended school for three months each year during the winter. She continued her own schooling while she taught others and, although she had attended college for only one year when she married Professor Benton, at the age of twenty-five, she held a position as the first woman County Superintendent of Schools in the history of the State of Minnesota. Her avid interest in education continued even after her marriage. Ten years later she was awarded a Phi Beta Kappa key and an A.B. degree at the University of Minnesota.

The son of a professor and a teacher, William Benton was raised on the campus of the University of Minnesota in an atmosphere of culture and learning. He attended Minneapolis public schools and developed a reputation as a boy soprano in an Episcopal church choir.

When William was thirteen years old his father died. His mother soon sold the family home and, with only a small Carnegie pension and a few thousand dollars in insurance, set out to homestead three hundred and twenty acres of free land near Zurich, Montana, with her two sons, William and Daniel. On adjoining homesteads were her father, a Civil War veteran with special privileges, and her brother. The claim was located twenty-five miles from the nearest railway station on one of the last tracts of public land opened for homesteading.

Elma Benton built a small clapboard house for \$3500, a vast price for a homestead, and the boys cleared forty acres of rock to get the arid land ready for the plow. It was William's job to haul the drinking water from the spring three miles away, to ride each week more than forty miles round-trip on horseback for the mail, and to clear the land with his bare hands and a pickaxe.

Each September the Benton boys left the barren Montana farm to attend Shattuck Military School in Faribault, Minnesota, as scholarship students, and to prepare for college. At Shattuck, an Episcopal institution and the country's first and oldest military school, William was a good student. He won honors in many subjects and ultimately stood first in his class among the four-year boys. He earned money selling memory books, stationery, class pins, and emblems, and he invented a binder, on which he secured a monopoly, to hold the school paper. He was graduated in 1917. During his summer vacation of 1918 he worked as a rodman for the Duluth, Mesabe and Northern Railroad on the iron range of Minnesota. By 1917 the homestead had been secured and Elma Benton left Montana. She returned to teaching in the Fergus Falls Minnesota High School and later as a high school history teacher in Minneapolis. She went on to Columbia University Teacher's College, earned a graduate degree, and obtained a position on the faculty.

William Benton enrolled at Carleton College in Northfield, Minnesota, where his aunt, Dr. Mary Benton, was Dean of Women. After his freshman year at Carleton, Benton was awarded a scholarship to Yale University. During his first year at Yale he served in uniform as a member of the Student Army Training Corps, but World War I ended before he could be called for combat

service. What remained of his mother's small inheritance after she left Montana was eaten up by the illness of his brother, Dan, who died in 1919. Benton helped pay his way through the University by working as an artist's model, waiting on tables, ushering, and clerking in a bank.

Benton maintained an excellent scholastic record, distinguished himself as a debater and scholar, and became a contributor to the *Yale Record*, the college humor magazine. In his senior year, serving as its editor, he developed an editorial campaign which boosted the *Record's* circulation and profits, and earned \$1200 for himself. Just before he graduated with an A.B. degree in 1921, Benton, on the advice of his mother, rejected a Rhodes scholarship to enter the business world. She told him that if he intended to go into education, theology, or law, she would urge him to take the scholarship for three years of study at Oxford University. "But you seem determined to go into business," she said, "and if so you had better be at it."

William Benton left Yale in 1921 with \$300. He had paid off his debts and had accumulated this surplus through his successful editorship of the *Yale Record*. His family learned with dismay that he had been "contaminated by Yale's gilded youth," when he announced that he was determined to become the first member of the family ever to enter business.

Breaking a hundred year family line of ministers and professors, Benton's first significant job was in the National City Bank College Training Department, where he worked summers while studying at the University. After graduation, he abandoned banking and obtained a job with the National Cash Register Company, whose founder, John H. Patterson, was known as "the father of scientific salesmanship." For almost a year, Benton did everything from sweeping the office floors and sending out monthly bills to making occasional sales presentations. He finally was given a territory in Oneida County, New York, as a salesman.

His mother, however, still hoped that he would eventually turn to a profession. She plead with him, "If you won't do something respectable like your Benton forebears, won't you at least be a lawyer?" She persuaded him to apply for entry to the Harvard Law School. With many misgivings about a law career, and with his room reserved at Harvard, Benton says, "My emotions rebelled and conquered my intellect. With a widowed mother teaching school, I couldn't stand the outlook of those three long years." He secured a job with Albert D. Lasker's Lord & Thomas Agency, then the country's largest advertising firm.

Defiantly from New York he wrote his mother, "Dear Mother, I have decided that I have some ability as a writer, out of my experience as editor of the *Yale Record*, and I am not going to the Harvard Law School. I have a job at \$25 a week with the biggest advertising agency in the United States. We write ads for Pepsodent Tooth Paste, Sunkist Oranges, Quaker Oats, Sunmaid Raisins, Palmolive Soap, etc." His mother replied, "Dear Son, I am sorry to learn that you have gone into a business that says Palmolive Soap is a good soap." Benton declares, "It's a good thing I decided against becoming a lawyer. Mother couldn't have let me defend a guilty client. I never could have made a living." In his \$25-a-week days at Lord & Thomas, he paid \$10 for room rent, and stretched the remaining \$15 so thin that his regular breakfast was a chocolate bar bought on the way to the office.

"In late 1923," Benton reminisces, "I was on the streets of New York hustling. I had sold cash registers, been a ninety-day armistice soldier, clerked in a Wall Street bank, worked in the iron mines of Minnesota, homesteaded in Montana, peddled bathroom fixtures on Avenue A, punched cows, and solicited accounts for an advertising agency. I was twenty-three years old. I was a man. And I was out of a job because Lord & Thomas wouldn't let me

write advertising copy. Perhaps it was my record as a cash register and advertising salesman that got me a job with the George Batten Company. At a salary of \$50 a week, I was spending \$60. Thrift has never been one of my virtues. My debts made me run advertising on my own account, bought and paid for with my own money. I ran an ad in *Printer's Ink*: 'For sale, cheap, a copywriter in a big national agency who will work nights at cut rates.' I picked up some free lance clients."

In 1924 Benton was offered the opportunity to go to work for a St. Louis firm at twice his \$50 weekly salary. He telephoned his mother, who was then headmistress at Hosmer Hall, an exclusive girls school in St. Louis, and told her, "You're making even more money than that, and between us we're really in the money. I'm quitting my job and coming out to join you." But she advised against it. "Billie," she replied, "men move from St. Louis to New York in the advertising business, not from New York to St. Louis." Benton remained with the Batten Agency for a few more years and, in 1927, was a partner in the firm at \$250 a week. He then returned to his first employer, Lord & Thomas, to accept a position as Assistant General Manager of the main office in Chicago. In 1929 he was ready to strike out for himself. When he informed Albert D. Lasker of his intentions, Lasker offered to double his \$25,000 salary in an effort to induce him to stay. Benton thought, "If I'm worth \$50,000 to Lord & Thomas, why can't I be worth \$100,000 to myself."

William Benton, with Chester Bowles, whom Benton had employed as an assistant at the Batten Agency, organized Benton & Bowles, an advertising agency, on July 15, 1929, with a total capital of \$18,000 and without a written contract or partnership papers. Ten months later, with the help of the Wall Street crash, they were insolvent. Benton states, "We didn't have the money to hire copywriters and research men. We had to rely on young inexperienced people. They were cheap. I spent a lot of time selecting and training these young people."

The success of the Benton & Bowles Agency was exceptional throughout the depression and has never been matched. Within six years it had the largest advertising office in the world. Benton assumed most of the executive and selling responsibilities, still writing copy nights. With his dynamic drive and ability for hard work, and never sparing himself, he inspired others to devote themselves wholeheartedly to their jobs. Benton & Bowles, one of the first agencies to recognize the vast potential of radio advertising, grew in six years to become one of the six largest advertising agencies in the world. Benton, then chairman of the board, suddenly quit the agency. He announced that he did not wish to get into a mental rut and saw no reason to go on merely piling up money. By this time, at a low point of the depression, Benton's earnings were \$400,000 to \$500,000 annually. At the age of thirty-five, he disposed of his interest in Benton & Bowles and, motivated by an increasing interest in the fields of education and public service, he retired from the advertising business.

Shortly after Benton announced his retirement from the field of advertising, Chancellor Robert M. Hutchins, his former partner on the Yale debating team, and who since 1929 had been creating excitement with his revolutionary innovations in education at the University of Chicago, called and asked him to take charge of public relations at the University. Benton turned down the proposal on the grounds that he had promised himself a round-the-world trip and that he wouldn't give up an exciting career in journalism to handle public relations, "which" he stated, "is just a fancy name for money raising," at any university, even a great one. Hutchins solved both problems. He requested Benton to spend only a few weeks doing a report on the status of the University's public relations—after which he could travel around the world, and he

offered Benton the academic vice-presidency of the University. Benton accepted on a half time basis and maintained his residence in Connecticut. Following in the footsteps of his ancestors, and after his trip around the world with Mrs. Benton, he returned to the University on October 1, 1937. Before Benton actually accepted the position, he dictated a book detailing all the things a university could do to promote better public relations.

The University of Chicago, when Benton arrived, was under violent newspaper attack as a nest of subversion; the Walgreen heiress had been withdrawn from the school with a burst of publicity because her professors were said to be corrupting her mind. Benton made his investigation, greatly aided by John Howe, the University's bright public relations advisor, who has successfully remained with Benton as his executive assistant through the years. He found nothing in the charges. Then, in what is perhaps the greatest single feat of salesmanship in his career, he convinced Walgreen that the charges were unfounded, with the result that Walgreen endowed the University with \$500,000. Benton considered his affiliation with the University at an end.

By renouncing advertising for the academic world, Benton felt that he had at last pleased his mother. In 1942, five years later, at the age of sixty-eight, when Elma Benton, a woman of prodigious vitality, brilliant mind and spirited soul, lay dying at her son's Connecticut home, Benton dropped everything—all his committees, his vice-presidencies, his chairmanships, his round-the-clock appointments—and sat at his mother's bedside. As he paced up and down in the darkened sickroom he received an extremely important long-distance call from Washington. The phone connection went bad and Benton began shouting into the instrument. Suddenly he checked himself and turned to his mother. "Am I too loud, Mother?" She replied, "No, but that suit of yours is."

Benton's first project on his first day as Vice-President of the University was the launching of a presentation aimed at selling the Rockefeller Foundation on investing \$4,000,000 in an educational film project. This was instigated by the interest of Lawrence and Nelson Rockefeller who had wanted to finance and run the company personally, but whose father had protested it. The Electrical Research Products, Inc., organized as a subsidiary of the American Telephone & Telegraph Company, had entered the educational field with the ERPI Classroom Films, and Benton dreamed of acquiring them for development by the Rockefeller Foundation and the University. He brought to his new position an intense interest in the possibility of radio and motion pictures as adjuncts to the educational facilities of the University. His goal was to broaden the scope of the University as a national cultural and educational force and the making of educational films was one way to achieve the goal. Although the Rockefeller Foundation failed to respond to his \$4,000,000 appeal, he later arranged the purchase of the Western Electric Company's film facilities and persuaded the Eastman-Kodak Company to donate its collection of classroom films to the University.

Furthering the work of the University of Chicago, pioneers in educational radio, Benton was instrumental in financing the *University of Chicago Round Table* on NBC radio for the expert discussion of major political, economic, and social problems by world-famous authorities. He then originated another network educational program series, *The Human Adventure*, which dealt with science and dramatized the research work of the University.

Although his work for the University occupied the major portion of his time, Benton continued his varied outside interests in business and public service. Several years previously, a friend deciding to go into the shoe manufacturing business asked Benton to put up \$5,000 to help him get started, and the Joyce Shoe Company became so successful that Benton later sold his interest for

\$125,000. In 1938, he invested \$132,500 in the purchase of the common stock of the Muzak Corporation, a firm that pipes music into business offices, restaurants, hotels, hospitals and factories. He sold the company in 1957 for \$4,350,000. In 1940, Benton gave his moral and financial support in setting up the New York newspaper *P.M.*, but disposed of his interest in the paper within two weeks of its first issue—the only original stockholder to emerge with a profit. He was actively involved in the organization that during World War II became The Committee for Economic Development. In 1942, he was appointed the founding vice-chairman of the original board of trustees of the Committee for Economic Development and wrote the basic policy essay for CED in his paper, *The Economics of a Free Society*. By this time Benton was certain that he would not continue indefinitely with an academic career and refused to consider the presidency of the University of Minnesota.

Benton's most important contribution towards making the University of Chicago a powerful educational force was the acquisition of the *Encyclopaedia Britannica*. In 1942, he instigated the initial arrangements by which the University later became the preferred stockholder of the *Britannica*. General Robert E. Wood, Sears' board chairman, feeling that a mail order house could not do justice to the ownership and publication of the oldest reference work in the English language, offered it to Benton, at his suggestion, as a gift to the University, but the trustees were reluctant to accept the offer. They felt that it would be improper for the University to invest endowment money as the working capital of a business. In addition, they doubted that the University would have the knowledge and ability to run a subscription book publishing business.

Benton met the trustees' objections by his offer to put up the needed working capital, and to take full responsibility for running the business and handling the sales organization. Under the final terms of the agreement, the University received the preferred stock of the publishing company as a gift from Sears. The preferred stock receives one third of all earnings. Benton purchased the common stock which furnished the working capital, and assumed the responsibility of all operations in his position as Chairman of the Board. To date, the University has continued to receive large royalties from the *Britannica*. In return, it contributes to its general editorial supervision and grants it the University's seal and imprimatur which are carried in all printings.

After assuming the Chairmanship of the Board, Benton renewed his interest in a project very close to his heart—classroom films. The ERPI Company was still available and he resumed negotiations to acquire the firm, by that time the country's largest and most important classroom film library. In November 1943, the purchase had been completed and *Encyclopaedia Britannica Films, Inc.*, with more than three hundred separate films available for loan or purchase by educational institutions, became the biggest company of its kind. Since 1943 *Encyclopaedia Britannica Films*—now separately owned by Benton—has become a major force in American education. Last year *EB Films* produced three hundred hours of classroom films; a single viewer would have to spend sixty hours a week for five weeks to monitor the entire output. Included in this output is a striking example of the Company's pioneering—a complete year-long course in chemistry, produced in cooperation with the American Chemical Society and taught by the best chemistry teacher in the United States. Today about one in three pupils in United States elementary and high schools sees films occasionally or regularly as part of the curriculum. Benton looks forward to the day when films will have established themselves in the United States as the greatest aid to teaching since the invention of the printing press. And he points to their unrivalled

power to help under-developed nations raise the level of their technical competence.

In addition to the standard 24-volume reference work, Encyclopaedia Britannica, Inc. publishes the *Britannica Book of the Year*, the *Britannica World Atlas*, the *Britannica World Language Dictionary*, and the 15-volume *Britannica Junior* which is designed specifically for elementary school children.

In 1952, after eight years of extensive research, Encyclopaedia Britannica, Inc., with William Benton as Publisher, launched another distinguished publishing venture—the monumental 54-volume *Great Books of the Western World*. It won world-wide acclaim instantaneously. Edited by Robert M. Hutchins and Mortimer J. Adler, this invaluable work comprises four hundred and thirty-three great works of seventy-three great minds.

Benton, a consultant to governmental leaders in Washington, contributed at least half of his time and energy to aiding the government during the war years. He had never considered a full time government position until September of 1945, when the one job that was offered him was described as impossible. Benton resigned his University duties in 1945, and took office on September 17, 1945, as Assistant Secretary of State for Public Affairs, under Secretary of State James F. Byrnes. His duty as Director of the State Department's Division of Public and Cultural Relations was to promote a better understanding of America by other nations, and involved the liquidation of the wartime Office of War Information and of the Office of Inter-American Affairs, and the integration of their functions into the State Department. His greatest challenge was to persuade Congress to approve funds for the State Department's *Voice of America*, by which American broadcasts could be beamed to iron-curtain countries. Benton succeeded in his efforts and organized America's first peace-time program of international information and educational exchange. This included the *Voice of America* broadcasts, Informational Library Services in foreign countries, maintenance of press and information offices overseas, and the exchange of students. He sponsored for the State Department such legislation as the Smith-Mundt Act, the Foreign Service Act of 1946, and the Fulbright Act.

His strong urge to help all peoples and to foster understanding among all peoples, materialized into action. When the United States became a member of the United Nations, Benton pointed out that the American people chose a policy of active participation in world affairs and security through understanding, rather than force. "Yet the plain fact," he stated then, "is that as we enter this crucial period of world history, America is neither fairly nor fully understood by the peoples of other nations." He constantly asserted that one important way of decreasing military expenditures was to strive for better understanding abroad.

Benton represented the United States as one of the founders of the United Nations Educational, Scientific and Cultural Organizations. He was the responsible officer of the State Department representing the United States at the London Conference of 1945 at which the UNESCO charter was written. He then served as chairman of United States delegations at two international UNESCO conferences, and in 1948 headed the United States delegation to the United Nations Conference on Freedom of Information. As a member of United States delegations, he has attended eight international conferences and served as chairman of the United States delegation at four.

In the immediate post-war period, Benton had a voice in virtually every aspect of State Department operations. At one point he alone blocked a proposed Congressional bill for the reform of the Foreign Service. Disregarding the fury thus created, he surveyed the situation, rewrote the bill to make the reforms more sweeping, then

presented his revisions to committees of both Houses. Some time after Benton's bill had passed, veterans of the Department, some of whom had been furious at his original intervention, in gratitude, elected him an honorary member of the Foreign Service Association, an honor given only to half a dozen other men, and to no one else who has not spent his life in the State Department. It is one of Benton's proudest trophies. Another award is a screen on which is pasted hundreds of letters and postcards in eighteen different languages, sent by members of the foreign audience to the *Voice of America*, and presented to Benton by his staff as a gift when he resigned from the Department. The inscription reads, "To Bill Benton, without whose valiant fight there would have been no *Voice of America*."

In December 1949, Governor Chester Bowles appointed William Benton United States Senator for Connecticut to replace Senator Raymond Baldwin, who resigned to become a member of the Connecticut Supreme Court. Senator Benton's appointive status was to end a year later with the next state-wide election. However, when he was nominated in July 1950 as the Democratic candidate for the balance of Baldwin's term, Benton was returned to the Senate—the second time since the Civil War that Connecticut had elected a Democrat to the Senate in a non-presidential year.

In March 1950, Senator Benton made his first speech on the floor of the Senate—a plea for a Fair Employment Practice Commission. In his fight against the McCarran Immigration Act, he continually asserted his belief in the importance of equality for all people. He supported the administration's foreign aid programs, Point Four and the North Atlantic Treaty Organization, in the interest of international relations, and also championed the United Nations. His suggested plans in 1950 for strengthening the international information program received wide support from General Dwight D. Eisenhower, Bernard M. Baruch, General George C. Marshall, Secretary Dean Acheson, and John Foster Dulles, all of whom came forward to testify for his plan in hearings before the Foreign Relations Committee.

Benton was a member of the Banking and Currency Committee, the Rules Committee, and the Joint Committee on the Economic Report, in addition to his appointment to a special Senate Committee on Small Business. With fierce insistence on free enterprise in American economy, he fought for three concrete plans to aid small business, and urged legislation to give small independent businessmen "security insurance." He supported two other steps—to allow small business a greater tax exemption on earnings in the \$25,000 to \$50,000 class, and to give small business a carry-forward provision in tax laws.

Senator Benton was often praised for his courage in resisting the pressures of special-interest groups and, though he did not belong to any bloc, he frequently arrived at decisions described as "liberal." Benton took an active part in the Senate fight for twenty-one Hoover Commission plans to reorganize and streamline the federal government, and received a citation from the Citizens Committee for the Hoover Report. As the 82nd Congress drew toward adjournment, he proposed the creation of a new Hoover Commission to further, in 1953, the work of the old and to promote efficiency in government.

Benton's dramatic resolution of August 6, 1951, calling for the expulsion from the Senate of Joseph McCarthy of Wisconsin, created a furor in Congress and across the nation. Benton charged that McCarthy had been guilty of a "pattern of fraud and deceit," and in testimony before a Senate committee the following month documented his findings. McCarthy refused to answer the committee's questions which developed out of Benton's charges. Three years later, on December 2, 1954, McCarthy was condemned by the full Senate. Many awards have come because of Benton's courageous

stand against McCarthy, and it has also brought penalties.

Benton was defeated by William Purtell of Hartford in the Eisenhower landslide of November 1952 when he sought re-election to a full six-year Senate term. Stevenson lost Connecticut by 129,000 and Benton by 88,000; he had been warned that he could not hope to carry the state if Stevenson lost by more than 30,000, under the tough problem of the Connecticut voting machine; he was one of only eleven of the thirty-five Democratic candidates that year for the United States Senate who ran ahead of Stevenson, and this in spite of the fact that McCarthy came into the state three times to campaign against him.

Late in 1955 Benton, with his wife and his thirteen year old son John, went to the Soviet Union, Poland, Hungary, and Czechoslovakia. It was a journey with a purpose—to find out for himself what was going on in Russia—in particular, to study the impact of Communism on the Russian people, to explore Soviet propaganda, and to inspect their educational system. He returned to the United States to speak and write widely, and to appear before Congressional committees, warning the country of the Soviet's extraordinary scientific and technological progress and of the imperative need to improve our own educational system. It was Benton's book, *This Is The Challenge*, that helped prepare the United States to see Russia as a challenge. John Gunther, author of *Inside Russia Today*, wrote the foreword. Adlai E. Stevenson wrote, "The American People owe a debt to William Benton for discovering and dramatizing the Soviet challenge."

Benton is a good husband and a good father. It was while he was a junior at Yale University that he first met Helen Hemingway of North Haven. She was then a freshman in Connecticut College in New London. In 1928 they were married. Mrs. Benton is a Connecticut Yankee by birth and upbringing and has an ancestry that stretches back three centuries to the founding days of the New Haven colony. After graduating from Connecticut College, she taught French and English in the Lakeville High School, Connecticut. Today she has many interests in the fields of literature, music, and art as well as national and world affairs.

Benton maintains two residences for himself, his wife, and four children, the family estate in Southport, Connecticut, a charming twelve-room house on twelve acres on Sasco Hill, overlooking Long Island Sound, and a house in Phoenix, Arizona. To his homes come scholars, painters, political leaders, writers, and learned men from all parts of the world. A true patron of the arts, Benton's collection is one of the finest private art collections of modern American paintings in the country. In education, Benton serves as an active trustee of five colleges and universities, plus two academic institutions affiliated with other universities, in addition to other philanthropic and public service groups.

A personality of immense force, to our age William Benton is a pillar of cloud by day and of fire by night, and one which leads into deeper deserts of thought and action in this nervous rapidity of contemporary civilization. His clean, aggressive face, his elegant appearance, his gracious manner, his pleasant voice, his rapid gestures and attitudes, his mental agility and adroitness, his habits of continually dictating memos and jotting down ideas in his little black notebook—all these peculiarly stimulating characteristics move him toward his goal with an iron purpose; nothing deters him.

Benton has in him a force of character far greater than he succeeds in bringing to bear on any of his multitudinous undertakings. This force of character strongly impresses his contemporaries, friends, employees, and audiences. The secret of his success? His admirable knowledge of the world, his knowledge of the human heart and of his own heart. He has a power of imparting genuine human quality to his friends, through all the eccentricities of their lives and surroundings. Whether as Christian or as a man of the

world, Benton is always himself and does not erect a palatial character like some powerful men in America, but has built a genial dwelling place where all the world is welcome.

Blessed with an inexhaustible supply of vitality, Benton is the nearest thing to a human dynamo in existence. Britannica executives call him "the busiest man in the world," and no one who has seen him in action for even an hour can doubt the truth of this description. He derives great satisfaction from living. His life is one of ceaseless activity. Men of genuine distinction, scholars, businessmen, political leaders, and educators seek him out to listen to his good sense.

Endowed with a feverish intellectual curiosity, he works with a concentration and rapidity that few modern business leaders know anything about. His indefatigable brain starts buzzing when he awakens and keeps on buzzing till he goes to bed at 2 or 3 A.M. He has a financial secretary, a woman of top experience; a political secretary, who was formerly secretary to the Governor of Connecticut; a personal and private secretary, who has been with him since his State Department days. Then there are the girls who are employed full time and kept busy in transcribing Benton's memos, to himself and other people, which pour out of him in an unending stream into a dictating machine. What most amazes his secretaries is not his whirlwind, breath-taking pace, but his dexterity and acuity in keeping mental track of a hundred different things at once.

He has engagements, business meetings, and innumerable conferences from breakfast to bedtime, and heartily enjoys every minute of his crowded day. Apparently immune from fatigue, Benton bears the strain without brainstorms or the fitful displays of temperament which characterize the artist. He avidly seeks information from everyone he believes can help him. He thinks, moves, and talks with lightning directness. He is impatient of delays, hates to waste time, and was one of the first businessmen to use airplanes because trains made him restless. He has no time for games or hobbies. He finds recreation in his work, which he enjoys so enormously that he never quite catches up. Minutes are his most precious asset. With remarkable ability in sustained concentration, he is willing to tackle any good idea or project, regardless of its complexity. Primarily an idea man, he is constantly bubbling over with programs, plans, campaigns, and crusades. Qualities which in other creative idea men are the fruit of cultivation, are entirely natural to Benton. A vast deal of work can be accomplished by the man who so regulates his life.

He writes much but nearly always under the spur of necessity; he talks spontaneously. He pours into the world a current of feeling, electrical and life-giving. Without imitating anyone, he handles language and ideas, at his best, with superb confidence. He possesses the true creative instinct, without which no amount of labor and diligence would have made him a success. Independence is the only thing that makes life worth living for Benton. He moves around the world at great speed. He knows where he is going and gets there fast. He gives himself freely; he throws himself upon life with the naive prudence of a child.

Benton's talents are of such an order that no undertaking, no matter how vast its size and diversity of its demands, has ever yet daunted his courage. He is a man who habitually aims at the impossible, and he often hits his aim. Despite his constant reaching for the unattainable, Benton is extraordinarily open-minded, generous, and self-disciplined. He has the courage to face the world honestly, and his ideas, when put into practice, bring forth results of alarming vitality. The influence of Benton upon the *Britannica* has exceeded that of any other man; his insights have been a source of inspiration for all true and honorable publishers. His unique ideas have been more various and daring in their method and

technique than those of any of his *Britannica* predecessors; and on the whole his publishing experiments have justified themselves, for example, the monumental and widely acclaimed 54-volume *Great Books of the Western World*, edited by Robert M. Hutchins and Mortimer J. Adler.

The qualities for which William Benton demands admiration are rather of the solid than the brilliant kind. In an age of imaginative license he preaches the need of restraint; in an age of hasty, careless workmanship he preaches the need of sound construction and good finish. He is, in the many things that appeal to him, a sharp observer—a profound analyst of the human mind—the subtle searcher into its follies, its frailties, its whimsies, its passions. He is gifted by nature with an eye and an ear marvelously sensitive to those slight and illusive impressions which most persons pass by without noticing at all. Critically his mind is an unerring instrument, and his honesty is a little less than amazing.

Benton glasses the world around him and without him, and, not losing his own identity, yet identifies himself with infinite varieties of mankind. His faith in humanity is simply incredible. He has a memory of unaccountable tenacity, with an extraordinary capacity to study and observe the human mind. His interest in people is sustained and piercing. By his frank contact with life as it is, and by his continual effort to see life in its plainness and entirety, he has attained to a grasp and insight which place him among the great names of American education. It would be fruitless to deny that in this thoroughness of thought there is something stimulating, something awakening; perhaps because it is a change from the conventional mode in which we are taught to look at the world. The real distinction in his views, his disregard of the accepted, the trite, and the commonplace, all serve to startle us into eager attention. His keenness calls for answering alertness in ourselves; his suggestiveness is tonic; even his outspoken frankness contains something of vigorous criticism that will not let us rest in conventional opinions but bids us prove all things and call everything by its true name.

The robustness of Benton's nature, its abounding joy and faith in life, make his speeches and writings a permanent storehouse of mental energy for the country. In an age distracted by doubt and divided by will, his strong and unfaltering voice has been lifted above the perplexities and hesitations of men, like a bugle call to battle in which the victory is to the brave. Benton is a man of affairs who has become a man of letters because literature is a means by which affairs can be directed. His writings and lectures have extraordinary freshness, energy, gusto. He revives old words, coins new ones, and puts current ones to a new service with the confidence and success unequalled by other public speakers.

He does not live his life secluded from the cares and struggles of the world, but is constantly occupied with his own relations to it. Accordingly, we observe in his writings and speeches a deep feeling for the world of man. A critic of sanity and force, he writes a perfectly simple and unadorned speech or article, very different from the elaborate styles practiced by his contemporaries. His voluminous public addresses, newspaper and magazine articles show the solidity, aggressiveness, and downright honesty of his mind. It is chiefly these qualities of aggressive decision and rugged honesty which have enabled him to hold for almost a quarter of a century his high position among the educators and book publishers of the world.

The practical spirit which Benton brings to his speaking and writing, his intention to make it serve a turn and accomplish a purpose, is reflected in his clear, powerful style. It is the feeling behind his thought that gives to Benton's style its curious, far-reaching eloquence. His substance is massive, full of fact, constantly brought to a white heat by the flame of his sincere passion, fervor,

conviction, and faith in the essential decency of human nature. Further, his contempt for all kinds of sham has led him to despise affectation; directness and simplicity are the virtues by which he sets most ideas.

His writings and speeches are coherent and exhaustive. They deal with many subjects, of public and private conduct, of government, of world affairs, of the nature and value of education and human relations. We get from them many large insights and generous points of view; everywhere we find keen observations, brave and clever liberal judgments. Even when he is unable to convince he is sure to impress and, especially in his writings, he brings to the totality of human experience a generous sympathy, a sharp intelligence, and a daring wit. He shows himself to be a consummate rhetorician, making for himself a style which is unmatched for flexibility and modernity in the conveyance of his thought. His is a thoroughly American type of sentence, short, crisp, and firmly knit. He rejects the conceitfulness and over-crowded imagery of the politicians, but knows how to light up his thought with well-placed ideas, and to give it an imaginative glow and charm. Not seldom, too, he lifts the curtain upon that inner passion of his existence, the thirst for intellectual truth. Benton's writings and addresses are of endless interest and profit; the more one reads them the more remarkable seem their compact ideas. Benton's ideas shock a sluggish attention into wakefulness as if by an electric contact; and though they may sometimes fail to nourish, they can never fail to stimulate.

With Benton's confidence in his fellows goes a great love for them, a love apparent in all the speeches into which he puts his real self. His remarks, often directed against the faults and absurdities of men, have a tenderness which goes beyond ordinary mildness, a note of kinship that is very different from other important men's aloofness. In his treatment of various subjects Benton displays the graces of understanding which are the expression of his character. His sense of humor saves him from putting himself on the defensive by over-emphasis. His writings—speeches, articles, reports, and editorials—total almost two thousand.

Satirist though he is at times, he is never misanthropic. A friend of Benton's remarked recently, "Whoever wishes to attain the technique of persuasion, familiar but not coarse, and powerful but not ostentatious, must give his days and nights to the public speeches of Benton." Another explained it this way, "There is an honest human quality about Benton's occasional inconsistencies that gives him, after all, a warm charm which his great contemporaries lack." A delightful letter-writer, Benton's letters form a very complete commentary on the intellectual movements of our period. With their quick human sympathy and solicitude, their eager ponderings upon life and clear insight into many of its dark places, the letters show a nature vitalized at every point, and keenly alert to reality.

Benton's approach to politics, subtle, guided by remarkable understanding, cutting like a blade to the core of essence, allows his imagination to range independently. He knows how to consummate the alliance of politics and morals. He displays the ability of the statesman without ever having recourse to perfidy. His high intelligence and the purity of his mind puts him, not outside, but above the political parties of our time; the firmness of his character keeps him there. He believes that America has a world mission in stemming the tide of the cold war, and in marshalling the forces of education and scholarship to lead the opposition to the enemies of democracy. He is no poseur, and he despises the little politicians with inferior minds who refuse to accept the social responsibility and to become champions of a democratic society—political creatures who are not capable of thinking for themselves. He does not care for the affairs of government arrogated by hard, insensitive men to their own selfish purposes.

He dislikes people possessing characters for which it is impossible to feel much admiration, people who exhibit the unworthy traits—greed, cynicism, ostentation, heartlessness, and lax public responsibility and morality. Yet, in his own way, he is also a prophet and a preacher, striving wholeheartedly to release his countrymen from bondage to mean things, and pointing their gaze to that symmetry and balance of character which has seemed to many noble minds the true goal of human endeavor. But the greatest merit of Benton is the spirit of tolerance. Toleration of the opinions of others is the keynote of his whole system of thought. As he goes on in years, his sympathy goes out more and more to the oppressed and unjustly treated of this world; and he spends a large part of his time and energy, as well as his fortune, in attempting to provide equal opportunities for all races and creeds by word and deed.

The articles which he has contributed to *The New York Times* and other newspapers and magazines are, for the most part, articles in the art of understanding ourselves, our government, our needs for public education, and our relationships with the nations of the world. They illustrate the practical nature of his own culture, his easy, skilled mastery of life. To the world of the twentieth century, with its crudeness, its grotesqueness, as revealed in the screaming headlines of daily newspapers, the coarseness of scandal magazines, and the juvenile westerns and trivial television programs, Benton comes as a missionary for the advancement of learning, knowledge, and understanding. He is successful because he is tactful. He considers it his task to enforce ideas of civilization, and in particular to overcome the anti-social tendencies of ignorance and lack of education. Thus we find many of Benton's remarks directed against the coarser vices of our time, against the lack of appreciation for scholarship and learning, against irresponsibility in government, complacency in foreign affairs and foreign policy, the triviality of life, the foibles of conduct, of thought, or of ideas.

Benton holds a commanding place in twentieth century thought, but he can hardly be called typical of the century. He does not share its characteristic melancholy; his imagination is always subordinated to thought, whereas the characteristic mood of this century is one of dreamy contemplation, in which imagination always takes the lead of abstract thinking; and finally he does not pass, as typical twentieth century leaders often do, from morals of earthly passion to moods of religious ecstasy.

In Benton's view of life, man is all important. The works of man, his society, his conventions, his expression of himself, are the great facts of the world. Man is indeed held down and sacrificed, by his own perversiveness and by that of his fellows; but he can rise against this human perverseness, attack it, and overthrow it, or die valiantly in the attempt. The struggle of humanity is one of man with men, and is always capable of yielding glorious victory. This hope gives brightness to all of Benton's speeches and writings. He leads the attack against those writers and thinkers who believe that man is of the smallest importance; that man's intellect and his works will never bring us nearer to the secret of the universe, to the essential reason or unreason of things. He is in combat against those who hold the view that thought is futile toward truth; that life is a tragedy which works man's humiliation.

Benton's world is an ideal one. It is the perfect expression of his philosophy of life. Troubles and disasters may accumulate like threatening clouds, but eventually will resolve themselves into beneficent showers. Suffering is not a problem; it is merely a device to make the world seem more beautiful. Evil always loses its essential qualities for the happy outcome. Love is bliss and tranquillity, and it is love, symbol of the eternal goodness of the world, that gives us the good reason for putting our trust in life.

Benton's abounding physical vigor is one of the greatest of his gifts. It furnishes him with unusual keenness of sense, and enables

him to apprehend and portray the primary facts of life with extraordinary vividness and frankness. Though he criticizes men with no reservations, he never forgets that he is one of them. From this inborn sympathy comes his large, tolerant way of looking at things, a view of life that often finds relief in raillery but never in cynicism. He laughs, but his laughter is never inhuman; and it is always ready to give place to tenderness and pity. For him the tragedy of life lies in the appearance of virtue and innocence in a world of evil, cruelty, and deception. In his presentation of this tragedy Benton is always direct, sincere, and simple. It is this humanity, the most essential quality of the educator and publisher, that makes Benton's thoughts permanently engaging and powerful.

Tired of contemplating man in the narrow sphere marked out by artificial society, and invested with the conventional attributes of crowded city life, Benton is looking beyond more than ever today and sees humanity as it appears in remote parts of the world. He has also learned to look toward the past with reverence, and with a desire to know it more thoroughly. Although life is frequently barren of joy, and escape from pain is the highest felicity, he makes no attempt to avoid the facts of existence; he adds no imaginative coloring to them. He faces life always with energy and courage. In spite of life's heavy burdens, people, he feels, should always believe in themselves.

But if some deny him appreciation, they cannot help feeling an admiration mixed with awe, for the loftiness and singleness of aim, the purity and depth of public service passion, which makes him conspicuous among the men of these moving times. It is this sureness of inspiration, this unity of accomplishment in Benton's life, this ability to abandon himself to his noblest impulses, that constitute his claim to something more than the glory that belongs to worldly success. His life of ceaseless labor in many fields of endeavor, his masterly ideas and profound thinking furnish reason enough for the high place which is universally conceded him by his countrymen. All told, he is fulfilling his life-purpose. It is impossible not to admire his spacious and voluminous mind, and the devotion to public service which constitute his deeper life. It takes many splendid qualities to make a William Benton, but at the bottom of them all and rising through them all is the good heart. ♦



*The wisdom of the wise and the experience of the ages
are perpetuated by quotation.* —DISRAELI



William Benton by Karsh

from the Wisdom of WILLIAM BENTON

Wisdom is like a break in an overcast sky. We must all unite in the hope that it is destined to grow—to grow until the clear light of truth and understanding breaks through to all peoples.

Success is the achievement of happiness.

Don't live for yourself. For if you do, you'll be the loneliest person in the world. To be happy, you have to become a part of something bigger than you are—something big enough so you can fight for it and live for it.

Don't be afraid of change.

Keep your mind fresh and ready to explore as much of life as you can.

Politics is much harder than business. In business you are judged by your success, and everybody forgets your mistakes. In politics, you are also judged by your mistakes.

The man with enterprise takes the risk and he hazards the uncertainty in order to reap the profit.

The world is not only changing fast—it's changing at a rate of speed that increases every year. Things like technical 'know-how' can become out-of-date rapidly; the man who has lost his adaptability suffers in times like these. But basic qualities of mind and character, on the other hand, have gained a new importance today; the man who possesses them will never be at a loss, for he will have retained the habit of learning new things every day. Change in the world can mean adventure to him and not tragedy.

I achieved my success by hard work, conscientiousness, drive and devotion. Hustling—hard, persistent, independent work—is and always has been the sovereign recipe for success.

Men who develop businesses of their own turn out to be the nation's most successful men.

The man who has the best right to be proud is the man who works for himself. The farmer is the man with pride. The village blacksmith had more than arms like iron bands; he had pride.

Don't worry because your chosen calling happens to be humble. The flunky in a great corporation can't possibly take the pride in his business that the corner grocer takes in the business he built himself.

Gifted students should be allowed to proceed at a more rapid pace through the educational system. If possible, they should be identified by early testing, and encouraged to develop their unique abilities.

One vast reservoir of talent consists of our entire present labor force, those whose education stopped when they left school. Can we not launch a national revival for citizen participation in education at all ages? I think we can, and this is a great challenge to our universities, much as they may resist it.

If we rally our forces in the United States to do a better job for education, then we shall do only what our own best tradition calls for. But if we are complacent about our educational achievements, if we allow ourselves to fall behind, we may find ourselves outwitted, outmaneuvered, outthought, and outbuilt throughout the world.

We must seek and assume the task of building "the defenses of peace in the minds of men." There is no other way to peace.

Today the challenge to good government blankets the world. In the current battle for the minds and hearts and loyalties of peoples everywhere, our greatest weapons are moral ideas.

Teamwork does not mean blind obedience; it merely means the cooperative relationship of courageous individuals.

Many people could live more enjoyable, more useful and rewarding lives if they satisfied more of their mental appetites.

I am no pessimist when it comes to anticipating the potential of the American people; but one would have to be an ostrich not to recognize the fact that we have been coasting—until just recently most comfortably and, in many ways, very satisfyingly—but the vacation from today's national and world realities has been expensive, made on tenuous credit, and we have wasted valuable time.

That honest desire to improve one's mind is a lust which Americans had better cultivate in increasing measure.

The glory of our system of life is that we need not be afraid of any ideas, any criticisms. What we have reason to fear are apathy and disinterest in ideas. At times in history when intellectual inquiry has fallen into disrepute, books have been bastions against barbaric attack and suspicion.

Great leaders rise to the top in any age, with or without the schooling we give our boys and girls today. Franklin had less than two years of school. Jackson and Lincoln had almost none. But the competition is getting hotter. With education, the average citizen of tomorrow improves his chance of raising his standard of living. With it, he can enjoy life more fully, and contribute to the common welfare.

In this day when excitingly new—and potentially dangerous knowledge and ideas are orbiting around the world we cannot complacently expect our children to assume our generation's intellectual duties. It's time we Americans embarked on a do-it-yourself intellectual program of our own.

We need technicians, engineers and scientists. But all our students should be grounded in the humanities as well.

Teachers must play a vital part in determining the new mold. If they are clear, if they are firm, they will help save their country, and western civilization with it.

In an area of competitive coexistence, the schools are ramparts of national defense. Teachers are frontline fighters.

Our teachers have told themselves too many times that they "lack community status." The way to elevate that status is to speak up. For example, the sales representatives of Encyclopaedia Britannica Films, of which I am Chairman, tell me teachers want far more classroom films than they get. Yet some communities think that films are being used extensively. School boards must finance additional film resources, and superintendents and teachers must not be afraid to ask for them. Unless our teachers now shoulder their way to the rostrum, we shall continue to waste our precious young talent; we shall fritter away irreplaceable time; and we shall end up by squandering money.

Within our own country, I would emphasize *liberal education*. Our greatest need is to understand the millions of words assailing us. This calls for clear thinking. That is the aim of liberal education.

Money is not what we need most. What the world needs is understanding. Our children must be taught to think, to think clearly, and to think for themselves. That will equip them not only to face the hazards of a changing world, but to make money when there's money to be made.

Those of us who believe in the free enterprise system must demonstrate our ingenuity not only in terms of our domestic problems, but also in helping to solve the production and employment needs of other free nations. We are in bed with them, whether we like it or not.

The exchange of information among peoples is not a one-way process. We take as we give; we learn about others while we teach them about ourselves. In the years ahead it will be as necessary for us to understand other nations as it will be for them to understand us.

Perseverance is worthless without character and intelligence.

The bigger that government grows, the greater is the need to make it responsible and effective.

My greatest *fear* is that people of the world will become increasingly insulated from each other; and that out of their ignorance, suspicion will grow.

One should try to develop a pair of sensitive ears. Sensitive ears, in turn, require a relatively open mind.

There is no substitute for time.

A political scientist I know has reduced to four short words the ways in which nations act on each other: by force, by deals, by goods and by words. The fourth instrument—words—offers the noblest, cheapest and, in the long run, surest way to peace. By "words" I mean information and education that will foster international understanding. Yet despite our achievements in communications, the peoples of the world are still grossly and *dangerously* ignorant about each other.

What task is there today which can compare with this one, the survival of freedom and the development of the spirit and the soul of mankind?

The agreement of the nations themselves to work together through all the channels of communication and with all the universal languages of science, art and learning to increase their understanding of each other and to root out the prejudice and ignorance which have separated them in the past, is a new thing in the history of international undertakings.

There is abroad in the world, among ordinary people, a deep if vague yearning. The ordinary people of the earth want to understand each other, and to understand the best of each other. They know that such understanding will minimize the risks of war.

Educating the whole man, rather than training the prototype of the specialist, the technician or the functionary, must remain our American goal. Yes, our young people need more mathematics and more science. But not because they must operate a technocratic society. They need mathematics and science because these disciplines are essentials of a liberal education.

Perhaps the world's most ambitious single project is the world-wide attack on the problem of illiteracy, and the establishment of minimum standards of education everywhere. This is a revolutionary undertaking.

Well over half the world's population is illiterate. Can the world achieve peace through understanding in the absence of the simplest tools of understanding, the ability to read and write? Illiterate men are pawns in a power struggle. They are also victims of an inequality so grave as to constitute a threat to peace.

When the tensions that produce unrest, suspicion and hatred among classes, races and peoples have been identified and diagnosed we shall know better how to attack the central problem of promoting peace through understanding.

from the Wisdom of WILLIAM BENTON



William Benton by Karsh

For America to help lead the world to peace, it requires skilled and courageous political leadership.

Character is the hardest thing to define, but is the most significant and important in life.

A woman once reminded me that when the Greek Gods were assigning responsibilities they gave the job of wisdom to a woman, Minerva. If the Minervas of this world don't hurry up and get greater practical results from their wisdom, in terms of tolerant, informed, and wise men, the human species may very well become extinct.

It takes experience and character to be wise. From experience comes learning and understanding. These words form a triumvirate—yes, and courage too. It often takes courage really to be wise.

I exhort young people to try to train themselves for public service contributions in the society that lies ahead. This will make them happier as well as more useful men and women.

Knowledge is essential to any man seeking wisdom. Knowledge gives us the key to understand the wisdom and the thoughts of the millions of men who have gone before, as reported in their writings. Knowledge as a mere accumulation of facts is not a quality that is highly prized.

The peoples of the world are now entering an era when energy comes from rocks and sunlight; when materials for shelter and clothing derive from air, water, and chemicals. Barring war, the aspirations of underdeveloped peoples will soon force industrial and educational development into every cranny of human society. If we of the United States are to meet the new challenge of the world-wide revolt against hunger and disease and ignorance—those who are our leaders in the field of education must march forward in the front ranks.

The educated man is the best weapon we have.

I never believe in underestimating an opponent.

The only prudent policy for the United States is to seek to multiply its own best efforts.

Too often in American higher education undergraduate studies are nothing but a hodge-podge of unrelated tidbits.

Schools and colleges have a special opportunity to work toward what must be established as the primary aim of American education: producing not highly trained technicians on the Soviet model but educated individuals on the American model—men and women who possess wisdom as well as knowledge; compassion as well as high personal standards; convictions as well as disciplined reasoning; sensitivity to beauty as well as tough-minded ability to distinguish between the genuine and the counterfeit; individuality as well as willingness to work together with others toward a common goal.

With boldness, imagination, and a willingness to change, American schools and colleges may well realize in the decades ahead the full potential of their matchless tradition.

Praise the Lord and Pass the Education.

I believe politics and education to be two of the three highest pursuits of man, and I have tried for two decades to devote myself to both.

Winston Churchill remarked that the quality most essential in a politician is "the ability to foretell what will happen tomorrow, next month, and next year—and then to explain afterward why it did not happen." Encyclopaedists are supposed to be more cautious. They look backward.

Our policy must be: right actions, and the right words—and enough words—to describe those actions. Thus we can prepare ourselves for any further intensification of the duel for the minds of men. Thus we can help build our defenses of the future.

The family that acquires the Britannica today receives the most complete and accurate compendium available of what the human race has been able to learn and to achieve during the past 30 centuries.

Education is now clearly and dramatically involved with our national defense, and thus with our national survival.

In a period of social change like ours, with the light of civilization burning low in many places, the hope of a better world lies with the young people of America and a few other nations. Half a century hence our six-year-olds will not only direct the destinies of America, but also perhaps of the world. Some of these thirty million boys and girls may develop as scholars, statesmen and leaders of industry and labor with the intellectual ability and training to show their world the solution of age-old problems.

Never has America—or the world—so needed excellence in its universities—or so needed excellence in its scholars dedicated to the study and development of public policy.

What is it makes so many of us easy targets for silver-tongued orators and their catchwords? *First*, it's easier to accept slogans than to think things through for ourselves. *Second*, it's safer to string along with the crowd than to stand alone. Many of the greatest men of history were ridiculed while they lived. That was because they stood alone. They dared to defy ancient customs. They refused to string along.

America—the richest country on earth, richest by far in all history, has a staggering backlog of unfinished business, unsolved problems, unanswered questions. Many of the answers, and much of the wisdom to gain acceptance for the answers, must come from the universities and increasingly from our great state universities. Our universities are the homes of scholars and they encompass the universe of knowledge.

Our political life has not had the dynamic, mature development of personnel that has occurred in technology and the healing arts. The glory of America resides in its infinite perfectibility. There is urgent need for more talent, vision and courage in that area of our life which must necessarily be pragmatic, empiric and always imperfect: the world of politics.

It would seem that the scholar and the politician are such opposite creatures as to be natural enemies. And indeed any expectation that the professors can set misguided politicians on the right track, simply by writing prescriptions which can be filled by a public administration druggist, is sheer hallucination. The beginning of wisdom for a teacher is to acquire some understanding of his students, and the scholar must understand that the beginning of wisdom for a politician is to get himself elected.

Scholars tend to be concerned with what the politician *ought* to do, as they should be, rather than with what he *can* do, as they also must be. And they tend to underestimate, often grossly, the extent and power for evil of public apathy. But the social scientists are learning the needs of the politician and are growing in stature and influence; the gap between the political scientist and the politician is narrowing.

We must guarantee the same rights to every person, regardless of who he is, or where he lives, or what his racial, religious or national origin may be.

A duty of the scholar which as yet is not sufficiently recognized involves knowing who can translate admirable doctrine into practical action. All of us know of Albert Einstein's letter to President Franklin Roosevelt, alerting him to the discovery that atomic fission was possible. This is a classic example of a scholar turning to a political leader to get action for the common defense in a war for survival.

The scholar and the politician should be partners in the business of mutual education. The politician can contribute to the scholar's breadth of experience. To achieve this, scholars should join political clubs, accept positions of responsibility in public life, and should also run for office.

I urge all of you to resolve to take some active role in the public life of your country. You who are to be scholars, prepare for a life of partnership with the politicians. You who are to be politicians, prepare for partnership with the scholars.

It is my experience, my belief, and my faith that—though the price of public service is high—the rewards, in terms of personal satisfaction, are more than worth the price. When your other desires and ambitions have been satisfied, or blunted by the years, your inherent desire to serve the public interest will persist. It will persist and it will sustain you.

Public service calls forth one's greatest capacities and capabilities. It challenges every man to work toward that goal which most western philosophers have agreed is the essence of happiness: activity that develops his highest powers.

Politics is a noble calling—one of the noblest—and I am proud to be part of it, even part time.

The ethical practices of politicians are greatly underrated in contrast to other groups in our American community; and it is by such contrast that they must in part be judged. The notion that all politics is dirty is one cause of the cynicism and apathy that keeps nearly half of all our eligible voters away from the polls, even in presidential years—a disgraceful record compared with the democracies of Europe. This idea that politics is dirty is also one reason why otherwise estimable citizens avoid any personal involvement in politics. The truth is that only some politics is dirty.

The things that make a politician good—and I include being successful in being good—are the same things that make a man good, and these are the old-fashioned virtues of courage, justice, temperance and prudence. What the public looks for is character and integrity—the confidence that this candidate isn't after anything for himself but is really trying to do the best he can for the public.

Picking the right wife is a major step on the road to political success.

I know of no field where the old maxim 'Keep everlastingly at it' pays off more surely or more quickly than in politics.

Our national survival, and the survival of free society, depend on how wisely and how well we Americans cultivate the liberal arts.

We shall never have enough men and women trained in the liberal arts, men who strive to think clearly and independently and who have acquired habits of mind which make them flexible and resourceful.

Cardinal Newman's ideal of liberal education, you will recall, was directed to self-discipline: to education "which gives a man a clear, conscious view of his own opinions and judgments, a truth in developing them, an eloquence in expressing them, and a force in urging them."

Clarity of thought and the capacity for fast clear thinking will become ever more important in the world of the future.

In the dizzy world I foresee, freedom will be in constant jeopardy and wisdom must be developed as a constant counter-weight. Originality and resourcefulness will become much more important than knowledge of techniques.

Russia has not only given up butter for guns; she has also given up meat for education.

from the Wisdom of **WILLIAM BENTON**



William Benton by Karsh

In the U.S.S.R., the State is the end, and the man is the means. In the U.S., the end of education is the development of the individual in his highest powers.

Peace depends on many factors—on a system of world law and world agreements, and on the economic well-being of peoples. But it also depends on the breaking down of prejudices—and, in particular, prejudice against strangers. America, I believe, is the only country where "Hi-ya, Stranger" is a greeting of friendliness.

The trouble with many young men today is that they are not looking for opportunity, they are looking for success. They don't mind starting at the bottom of the ladder, but they want somebody to hold the ladder for them. They ought to shun the premature senility inherent in the mess of potage labeled security. They are the custodians of the tradition that risk belongs to youth and security to age.

Einstein used to remark that politics are more difficult than physics, and that the world is more likely to die of bad politics than of bad science. Obviously, we as a nation must now make a far larger investment in education for science than we have in recent years. It would be tragic, however, if our response were confined to this. We must train men in the humanities and social sciences, in law and theology. Our present deficiencies in scientific education are dramatic symptoms of confusion and neglect throughout our entire educational system; they are not the disease itself.

We can and we must find ways of channeling more of our wealth, more of our talent, and more of our resourcefulness and so-called know-how into our educational system.

Low salaries are not the only cause of the shortage of teachers. Low prestige is another.

Our basic problem is to attract more young people into teaching as a career, and to use them effectively, and to keep them teaching.

Some 200,000 high school graduates of high ability each year fail to go on to college, half of these for financial reasons. Three out of ten youngsters who do not move on to college have intellectual capacity to rival our most brilliant professors and our most productive inventors.

We have become one of the strongest nations on earth, in both a military and an economic sense. Because of our very power we are now in danger of being mistrusted and feared.

We cannot manufacture scientists and scholars overnight, as we turned out tanks and planes during World War II. Delays in coming to grips realistically with this problem will make it cumulatively worse.

Scientists should be trained not only in their specialties but in history, in literature, in philosophy as well. Conversely, good basic training in science and mathematics must be part of the education of the philosopher, the historian, the lawyer, the businessman—and the Senator!

The main lesson which should be drawn from the Soviet curriculum, and applied to our schools, is the lesson of hard work. We don't demand enough from our students. We have hesitated to make them study hard, to make them master definite tests of attainment or face the disappointment of failure. Aristotle long ago commented that "learning is accompanied by pain." The late philosopher, Alfred North Whitehead, reminded us that "no reform in education can abolish the necessity for hard work and exact knowledge." We have allowed the hard core in our education to dissipate.

Educators have almost always had to beg for money. Back in 1426, the fathers of Oxford approached the Duke of Gloucester for help, and put their case this way:

"What aim can be more noble than the advancement of learning, which raises man above the beasts and lifts him towards a higher life? It was a divine inspiration that suggested a foundation of lectures, and we hope the intention will be fully carried out. Let not poverty, that cursed stepmother of learning, disappoint us of our hopes." I say today, in this boom year of which some are boasting, let not the plea of poverty, a still more despicable stepmother of learning, deprive our children of their future development in freedom, and our nation of its destiny.

My message to young men and women is: cultivate politics and the politicians; make forthright demands upon them for what you know is right—and instruct them as you can. Politicians are teachable. The fact that the words politics and political are popular synonyms for what is low, base and degrading need not dismay you. This cynicism is deeply rooted in American tradition. "I am not a politician," the early American humorist Artemus Ward said, "and my other habits are good." Such distrust stems from the 18th century origins of our Constitution, which was designed to protect the individual against what the government might do to him. It also reflects the philosophy of speculators of the 19th century who sought to grab all the land grants and all the protective subsidies they could get, and who despised efforts to have the government protect the customers from depredation. They invented the jargon that the honest politician is the one who stays bought.

"The gentleman of culture," says the distinguished scientist-administrator-educator, Vannevar Bush, "is a man who aspires to wisdom—a member of that group upon which the continuance and further development of our free way of life intimately depends." I like that adverb 'intimately.' I have long believed that the liberal arts not only produce gentlemen of culture but also are the best education for businessmen.

Speeding up our reading means speeding up education—not only in school, but in later life. Until large sections of the adult population learn to read more rapidly and skillfully, they will be incapable of that independence of thought which comes only from a wide and intimate knowledge of the printed word.

The difference between a college and a university is far greater than most Americans appreciate. A college is chiefly concerned with teaching. Its main job is to acquaint young citizens with the essential parts of mankind's accumulated learning. Its purpose should be to train them to think—to think clearly and to think for themselves. That is an important job. A university's job on the other hand, is not so much to teach as to learn. In other words, it is concerned with discovering new knowledge. And that is a more important job, if civilization is to advance. A university might do no formal classroom teaching and still be the greatest university in the world. It would need no students in the accepted sense, no seekers after degrees, but it would need the greatest staff of scholars and investigators, and the best equipment, that could be assembled.

Trained manpower is money in the bank. It is our most important national resource.

A million dollars in the bank isn't worth a dime if the bank is closed. In other words, it's a good thing to develop reserves other than bank reserves; to accumulate riches that can't be taken from you. You'll find the accumulated riches of human experience in the great books. You can help yourselves to them. They're available in libraries; they aren't hoarded away or locked up in vaults. For years we've been trying to train our children to get rich. Most of them are still poor. Let's try training them to think.

A university is made great by having great scholars and investigators on its staff, by providing them with equipment, and by giving them freedom to search for the truth. If we deny them freedom, we are claiming that we already know all the answers to our problems.

Tolerance can come only from education.

You need character to be wise. Can a man be wise without moral values and essential moral judgments? I don't think he can. I think you must have character to be wise, and, historically, the great figures we think of as the wisest men have been men of high character. We don't remember Spinoza because he was rich or even because he was learned. The men we look back upon with the greatest respect as the wisest men who ever lived, were men of high moral character. Do we think of Napoleon, one of the great leaders of all time, as being wise? Napoleon doesn't come down historically as a wise man. His failures were often failures of character.

One of our most hopeful lines of action is to make the Soviet people aware of how wide the discrepancy is between their own standard of living and that of the West.

The time may shortly arrive when the United States will be the chief center of the world's learning, the home of man's eternal search for truth.

On many of the great issues of our time, men have lacked wisdom because they have lacked courage. I think that of all the qualities courage is the most important... added to experience.

At the first meeting of the U. S. Commission for UNESCO, I told the members that the reason women do not "do as well" in this world as the men is that they do not have wives.

We Americans pride ourselves on being a nation of readers. But despite our high degree of literacy, few of us actually know how to read any better than a child should in the eighth grade. More than half of all school failures are traced to bad reading habits, and even scientists and scholars often read no more efficiently than uneducated day laborers.

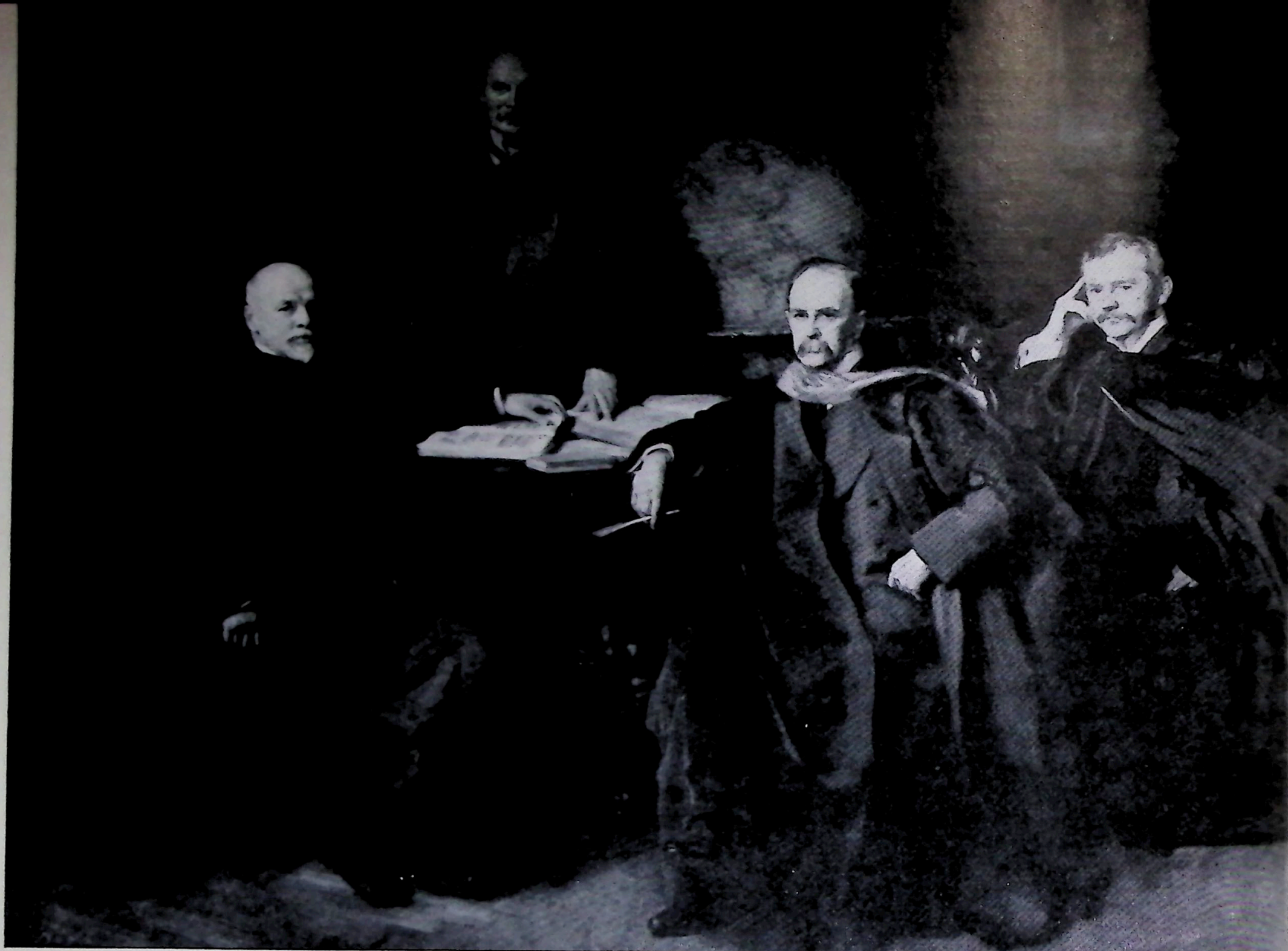
What is the answer of our free society to the slave cultures of the totalitarian masters? Is it not in part the dissemination of the truth by all available means? Is not the search for truth the most democratic of all pursuits? Is not the expression of truth the ultimate goal of all art and all science? And is it not truth to which we must cling as the key to real understanding among free men and free nations? The dissemination of truth is the counter weapon, the only counter weapon capable of fending off and neutralizing the lies and distortions of totalitarian propaganda. The dissemination of truth is the supreme weapon in the battle for the hearts and minds of men—the political battle which is engulfing the world.

Courage is the surest of the qualities which pay off in commercial life. The man who has courage tends to be the fellow we think of as a man of character.

Ideas are enormously important in foreign policy, politics, and religion but overrated in the commercial world. Ideas are valueless without follow-through. The rewards in business go to the man who does something with an idea.

Intelligence is greatly overrated in the business world and the practical world in which we live but greatly underrated in politics.

The Preamble of the Constitution points out that wars stem from conditions of suspicion and mistrust between the peoples of the world. These are partly the result of ignorance of each others ways and lives.



"Four Great Men of Wisdom," a painting by John Singer Sargent

WHAT IS AN EDUCATED MAN?

by Dr. George A. Coe

1 An Educated Man is one who is trained to use the tools of human intercourse with readiness, precision and accuracy, especially language and the rudiments of number.

2 An Educated Man must be able to study and to think without guidance from others. He must be—to some extent—a thinker, not an imitator.

3 An Educated Man must have sufficient knowledge of nature to understand the main processes upon which human life and happiness depend.

4 An Educated Man knows enough history to enable him to understand the main achievements of man.

5 An Educated Man is acquainted with the major resources for intellectual and esthetic enjoyment. He knows nature, literature, music, and the other arts sufficiently to choose superior to inferior enjoyments.

6 An Educated Man is marked by his interest as well as by his trained abilities. His attention is habitually attracted by significant rather than trivial thoughts, objects, events, noble pursuits, and worthwhile enjoyments.

7 An Educated Man must have not only this general culture, but also training for a specific occupation.

8 An Educated Man must have toward his fellows the habitual attitudes that are commonly called ethical—such attitudes as honor and honesty, helpfulness and good-will and co-operation.

9 An Educated Man must have loyalties to at least some of the important organizations and institutions of society.

10 An Educated Man must have some apprehension of, and feeling for, the divine; the ideally educated man will reverence God, and know how to worship.

THE WISDOM SOCIETY

FOR THE ADVANCEMENT OF KNOWLEDGE, LEARNING AND RESEARCH IN EDUCATION
PUBLISHERS OF WISDOM MAGAZINE

WHAT IS THE WISDOM SOCIETY?

THE WISDOM SOCIETY FOR THE ADVANCEMENT OF KNOWLEDGE, LEARNING AND RESEARCH IN EDUCATION is a non-profit educational publishing institution dedicated to the advancement of American adult education and to the highest aspirations of the human mind and spirit. It is not a commercial business operated for profit. It was established exclusively for educational purposes and devotes its income wholly and solely to furthering its educational objectives. Like colleges and universities, THE WISDOM SOCIETY operates completely in the field of public service through education and it has won its way to world-wide renown through sheer merit of accomplishment. It has a distinguished record of service to the nation.

WHY WAS IT CREATED?

As a vital educational force, THE WISDOM SOCIETY was founded to make knowledge reasonably available, more easily and more economically accessible to all; to preserve and strengthen the great ideas and ideals of the human mind in order that we might continue to enjoy the benefits which they have contributed to our American way of life and to the enrichment of civilization; to encourage people to read widely, think deeply, and feel intensely about the world and men. Today, when education is so much needed in the world, THE WISDOM SOCIETY renews its devotion to these objectives and ideals.

THE WISDOM SOCIETY strives to develop and extend a person's mind to where he is ready and eager to carry on his education under his own initiative—challenging him to his best achievement. It provides constant stimulation for the building of a firm educational foundation and the fullest use of a freely inquiring mind. THE SOCIETY has accepted the immense task of preserving, improving and enriching American educational standards. Against the pressures of materialism, opportunism, sensationalism, and anti-intellectualism, THE SOCIETY stands firm in its noble aims and high ideals, and nurtures the important idea that the education of our citizens is our most priceless resource.

IS THE ORGANIZATION INDEPENDENT?

THE WISDOM SOCIETY is completely independent and occupies a position of unusual freedom. It is not related to or connected with any other publishing company, commercial business, educational institution, philanthropic foundation, or religious group. It is non-sectarian, non-political, non-controversial, and is free from the controls of needing to slant editorial policies to the judgment and the prejudices of businessmen, advertisers, and pressure groups. THE SOCIETY furthers the practice of American democracy by recognizing no barriers of race, color, or creed.

DOES THE SOCIETY PUBLISH WISDOM?

THE WISDOM SOCIETY maintains a permanent editorial staff to research, write, illustrate, edit and publish WISDOM MAGAZINE, and to conduct research studies in all fields of knowledge: Art, Biography, Economics, Education, Government, Health, History, Law, Literature, Medicine, Motion Pictures, Music, Philosophy, Psychology, Religion, Science, Sociology, Television, Theatre, Travel, World Affairs.

WHAT RESEARCH DOES THE SOCIETY DO?

THE SOCIETY takes the world's knowledge and wisdom for its province. The articles and pictures in its magazine, WISDOM, represent many thousands of man hours of endless research work through the world's public and private libraries, scientific museums, art galleries, historical archives, colleges, universities, educational institutions, photographic studios, government bureaus, and private collections on every conceivable subject—research work done on a world-wide scope by WISDOM editors, writers, researchers, photographers, artists, illustrators and contributing authorities and specialists in all fields of knowledge and education. WISDOM is a magazine that requires such exhaustive research, writing, illustrating, and editing that its accomplishment is beyond the means and facilities of the average magazine—and far beyond those of individual readers. Through the pages of WISDOM MAGAZINE, which is available only to its Members, THE SOCIETY presents the treasures of the world's knowledge and wisdom for the benefit of those men and women who regardless of educational, social, or economic background find pleasure and satisfaction in continuing their educational and cultural development. WISDOM MAGAZINE does not carry any advertising. Its articles and pictures are of lasting interest and permanent worth.

THE SOCIETY also distributes free of charge hundreds of thousand of copies of WISDOM to educators, teachers, students, clergymen, libraries, schools, colleges, and universities in the United States and throughout the world.

TO WHAT ARE MEMBERS ENTITLED?

Membership includes: 1. A full year's subscription to WISDOM MAGAZINE, which is published every other month. 2. A Membership Certificate of Honor, inscribed with Member's name, printed on fine parchment paper suitable for framing. 3. A First Edition of WISDOM, autographed to the Member by the Founder-Publisher, \$15 (to Non-Members \$25—not autographed). 4. Any Limited Edition of WISDOM in print (except First Edition), \$3 per copy (to Non-Members \$5). 5. Gift cards inscribed with donor's name, for every Gift Membership given. 6. General Index to WISDOM issues for permanent reference.

HOW DOES ONE BECOME A MEMBER?

WISDOM MAGAZINE is not sold on newsstands or in bookstores—it is available only by membership in THE WISDOM SOCIETY. Membership in THE SOCIETY is a golden opportunity. It will pay you rich dividends. Annual Membership is \$15. This is not a subscription payment. It enables THE SOCIETY to carry on its educational research in all fields of knowledge, and to bring to its members the great treasures of the world's wisdom through the pages of WISDOM. Membership includes a full year's subscription to WISDOM MAGAZINE, which is published every other month.

THE SOCIETY WELCOMES YOU

Accept our invitation to become a member of THE WISDOM SOCIETY, and join with us in advancing knowledge, learning and education. We have every reason to believe that WISDOM is worthy of your encouragement and deserves your hearty cooperation. It carries no advertising and is free from its distractions. It is the one inspiring magazine in America that stands out morally, intellectually, and spiritually, and the only magazine in the world dedicated to wisdom.

THE WISDOM SOCIETY would be proud to have you among the distinguished members. Your acceptance will be welcomed and appreciated. We will send you an attractive Membership Certificate of Honor. This will be inscribed with your name, and printed on fine paper ready for framing. It is something you will cherish and to which you will point with pride.

If you have a friend, relative, or business associate whom you would like to sponsor for Annual Membership in THE WISDOM SOCIETY, just send us the name and address, along with your check or money order for \$15 for each person. Or, if you prefer, send no money. We will bill you. Your check can follow later. Be sure to include your own name and address. We will then mail to each of your friends not only a Membership Certificate of Honor carrying his or her name, but a beautiful gift card inscribed with your name announcing your gift.

MEMBERSHIP APPLICATION:

REMEMBER, TO APPLY FOR MEMBERSHIP JUST SEND US YOUR NAME AND ADDRESS. We'll do the rest. Annual Membership is renewable every year, and entitles you to benefits and privileges of THE SOCIETY, which includes your receiving WISDOM MAGAZINE for a full year. Enclose your check or money order for \$15 for each Annual Membership. Or, if you prefer, send no money. We will gladly bill you later. Send your letter to:

THE WISDOM SOCIETY
8800 WILSHIRE BLVD.
BEVERLY HILLS, CALIFORNIA

To lack wisdom is no disgrace.

To lack the desire for wisdom is a pity;

But to desire wisdom and not know how to find it is a tragedy.

WISDOM

THE MAGAZINE OF KNOWLEDGE FOR LIFETIME LEARNING AND EDUCATION



ENCYCLOPAEDIA BRITANNICA PUBLISHER WILLIAM BENTON

Portrait by Karsh of Ottawa

LIMITED EDITION

WISDOM OF THE ENCYCLOPAEDIA BRITANNICA

AND OTHER TIMELESS ARTICLES MAGNIFICENTLY ILLUSTRATED